

BRIGHT SOLUTIONS TO EMPOWER YOUR LIGHTING.



LED LAMP FACTORY

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LED DIMMER FACTORY

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*The contents of this volume are for reference only, and the relevant updates are subject to the enterprise announcement

FREE LIGHTING
LIMITED



LED BULBS

BRIGHT SOLUTIONS TO
EMPOWER YOUR LIGHTING

2026

www.freelightingled.com



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About us

FREE LIGHTING is a professional LED lighting manufacturer located in Shenzhen, China. For the past 17 years, we have strived to provide highly reliable products and customized solutions, powered by advanced technology, to customers around the world.

We proudly deliver an annual output of 4.8 million LED light bulbs and 740,000 dimmers globally.

In 2013, we began developing LED miniature lamps. We launched the FREE LIGHTING ceramic miniature series and, in 2014, introduced our first patented G9

lamp—designed to address common issues such as low lumen output, poor color performance, and high light decay in existing LED miniature lamps.

In 2017, our 4.5W dimmable G9 lamp became the first to pass a 10,000-hour aging test. It also successfully met ERP, JA8, and Energy Star lifetime standards.

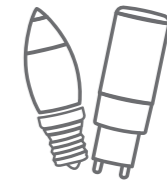
In 2019, we launched the FREE LIGHTING LED dimmer series, equipped with electronic short-circuit, overload, and overheat protection—engineered specifically to solve compatibility issues often found between dimmers and LED light sources.



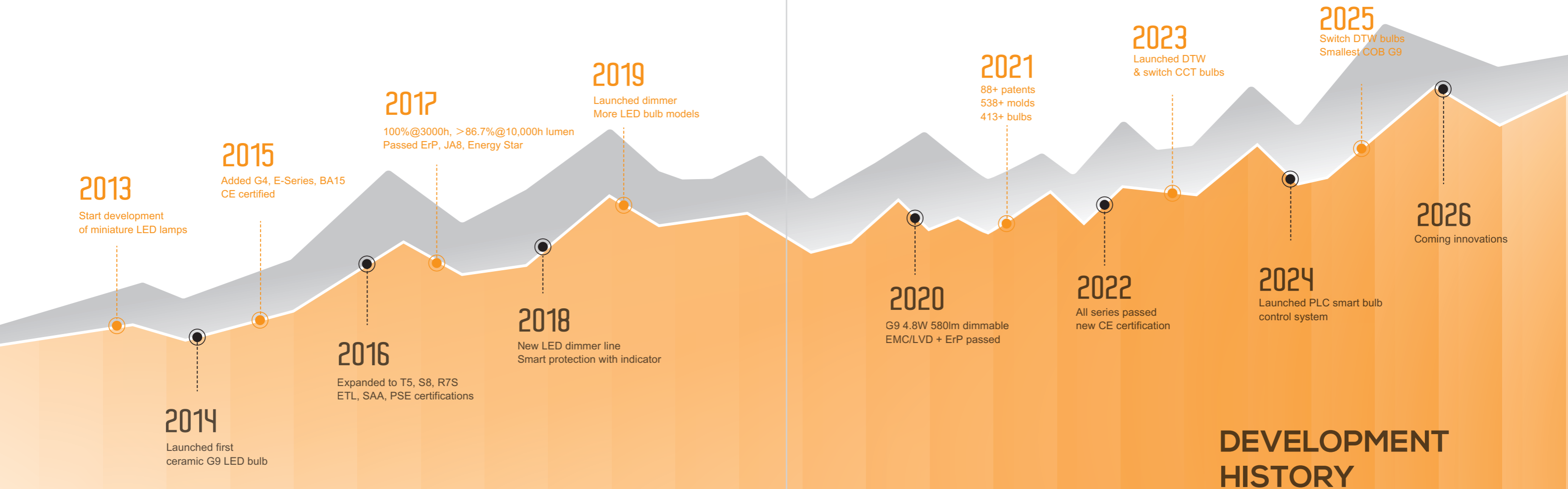
538
CERAMIC MOLDS

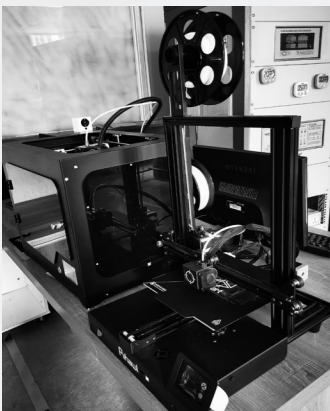
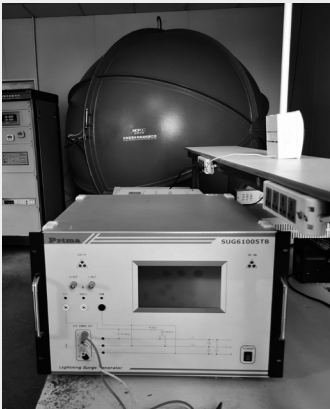


88
PATENTS



413
BULB MODELS





CONFIDENTIALITY & PRODUCT SAFETY GUARANTEED-88 PATENTS & FULL CERTIFICATIONS

We are a company with Integrity.
We understand how important to secure your original ideas and designs so that you will stay competitive in the market.
We can promise all the certifications and tests from our factory are based on real and accurate test data.

HIGH EFFICIENCY R&D

We Love what we do! And we do it fast!
With rich experience and passion, we can finish a new project within 45 days.
We developed over 538 ceramic molds and 413 LED bulbs which can match all specifications you need.

STRONG R&D SUPPORT

We are not afraid to invest in future.
We are fully equipped with advanced test machines to shorten the development cycle for our customers.
For example, we have EMC test system, surge test system, digital photometer and 3D printer for development.
Also, we have photometric and electrical test system for quality control on mass production.

STRENGTHS

COMPLETE QUALITY CONTROL SYSTEM TO PROTECT YOUR BRAND

To protect your brand and company reputation with reliable product quality is our mission.
During the early stage of new product development, we will pay attention to all design details to ensure good and stable quality can be achieved during mass production.
We perform 100% quality control for all products.
Every light bulb requires to pass 4 procedures tests and 6-8 hours aging test before packing.
Besides our skillful and stable workers are key contributors to maintain high quality standards.

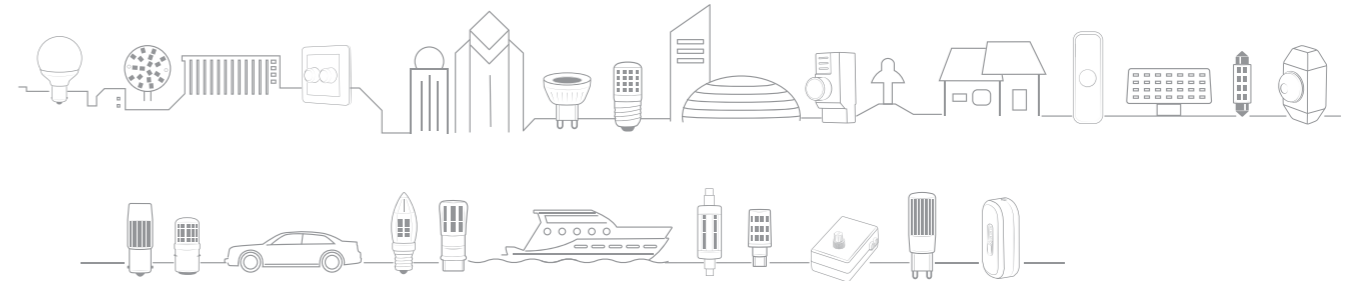
PROFESSIONAL TEAM TO SERVE YOU BETTER

FREE LIGHTING has 48 employees. We are responsible, hardworking and stable.
R&D Engineer Team and sales Teams work very closely to provide efficient and professional service to our customers.
We will never stop improving.

LED BULBS

G9 EDISON G12 GY6.35 G4 B22
 BA15S BA20 T5 MR16 S8 EZ10
 E26/27 GX53 GU10 PLC R7S E14
 SWITCH CCT BULB P28s BA15d G8

WHEN IT COMES TO LED LIGHTS AND INNOVATION, FREE LIGHTING LIMITED HOLDS AN INCREDIBLE 88 PATENTS. WE HAVE ALSO DEVELOPED MORE THAN 538 CERAMIC MOLDS IN OUR MINIATURE LAMP SERIES. TODAY, OUR COMPANY PRODUCES 413 LED BULBS AND HAS AN OUTPUT OF 4.8 MILLION LED LIGHT BULBS ANNUALLY.

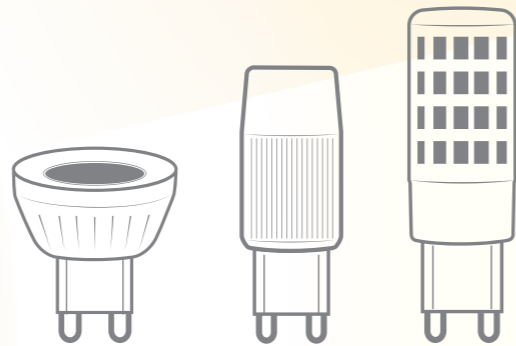


IN 2014, FREE LIGHTING DEVELOPED OUR FIRST CERAMIC LED G9 BULB SERIES—AN INNOVATION THAT IS NOW WIDELY RECOGNIZED ACROSS THE LED LIGHTING INDUSTRY AND BY CUSTOMERS AROUND THE WORLD. WHAT SETS OUR G9 LED BULB SERIES APART IN A CROWDED MARKET IS ITS COMPACT SIZE AND IMPRESSIVE POWER OUTPUT. THESE BULBS ALSO OFFER EXCEPTIONALLY HIGH LUMINOUS EFFICIENCY, SUPERIOR STABILITY, MINIMAL LIGHT DECAY, AND A SIGNIFICANTLY LONGER LIFESPAN COMPARED TO MANY OTHER LED BULBS ON THE MARKET. FOLLOWING THE SUCCESSFUL LAUNCH OF OUR PATENTED G9 BULB IN 2014, FREE LIGHTING EXPANDED ITS PORTFOLIO TO INCLUDE A

COMPLETE SERIES OF MINIATURE LED BULBS FOR THE GLOBAL MARKETPLACE. OUR CURRENT RANGE OF HIGH-PERFORMANCE LED LIGHTING PRODUCTS INCLUDES THE FOLLOWING MODELS: G4, GY6.35, G8, G8.6, G9, G12, GU24, E10, E11, E12, E14, E17, E26, E27, T5 (T10), S8 (T22), BA15S, BA15D, BA20S, BA20D, BA22P28S, R7S, AND MORE. WHEN IT COMES TO LED INNOVATION, FREE LIGHTING HOLDS AN IMPRESSIVE 88 PATENTS AND HAS DEVELOPED OVER 538 CERAMIC MOLDS FOR OUR MINIATURE LAMP SERIES. TODAY, WE PRODUCE 413 LED BULB MODELS AND MAINTAIN AN ANNUAL PRODUCTION CAPACITY OF 4.8 MILLION LED LIGHT BULBS.

G9

SERIES



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



DIMMABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		



No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-G9-2.5W-015DIM	120V AC / 230V AC	2.4	260	φ 16 x 38	7	0.9	80 / 90 / 95	4/6
2	FR-G9-3W-005DIM	120V AC / 230V AC	2.9	290	φ 16 x 45	10	0.9	80 / 90 / 95	4/6
3	FR-G9-3.5W-014DIM	120V AC / 230V AC	3.4	360	φ 18 x 50	12	0.9	80 / 90 / 95	4/6
4	FR-G9-3.5W-019DIM	120V AC / 230V AC	3.3	380	φ 17 x 42	11	0.9	80 / 90 / 95	4/6
5	FR-G9-4W-010DIM	230V AC	3.8	410	φ 18 x 49	11	0.9	80 / 90 / 95	4/6
6	FR-G9-4W-011DIM	120V AC	4.0	400	φ 18 x 49	12	0.9	80 / 90 / 95	4/6
6	FR-G9-4.5W-019DIM	120V AC / 230V AC	4.1	480	φ 18 x 49	12	0.9	80 / 90 / 95	4/6
7	FR-G9-5W-020DIM	120V AC / 230V AC	4.8	580	φ 19 x 49	12	0.9	80 / 90 / 95	4/6
8	FR-G9-6W-004DIM	120V AC / 230V AC	5.1	630	φ 18 x 57	17	0.9	80 / 90 / 95	4/6
9	FR-G9-6W-012DIM	120V AC / 230V AC	5.3	720	φ 20 x 57	20	0.9	80 / 90 / 95	4/6
10	FR-G9-6W-019DIM	120V AC / 230V AC	5.8	730	φ 19 x 77	23	0.9	80 / 90 / 95	4/6
11	FR-G9-6.5W-001DIM	120V AC / 230V AC	5.8	800	φ 19 x 77	23	0.9	80 / 90 / 95	4/6
11	FR-G9-7W-008DIM	120V AC / 230V AC	6.5	900	φ 19 x 77	26	0.9	80 / 90 / 95	4/6
12	FR-G9-8W-009DIM	120V AC / 230V AC	7.8	1100	φ 18 x 87	38	0.9	80 / 90 / 95	4/6

*JA8 & TITLE20 PASS

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K



DIMMABLE

Flicker Free | Ceramic+PC | 3 Years Warranty
 CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE
 Suitable for use in damp locations
 Suitable for use in totally enclosed lighting fixture



No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-G9-1.5W-010DIM	120V AC / 230V AC	1.5	130	φ 18 x 43	8	0.9	80 / 90 / 95	4/6
2	FR-G9-1.5W-007DIM	120V AC / 230V AC	1.5	140	φ 20 x 46	10	0.9	80 / 90 / 95	4/6
3	FR-G9-2.5W-010DIM	120V AC / 230V AC	2.5	230	φ 16 x 48	7	0.9	80 / 90 / 95	4/6
4	FR-G9-3.5W-021DIM	120V AC / 230V AC	3.4	310	φ 18 x 50	11	0.9	80 / 90 / 95	4/6
5	FR-G9-4.5W-021DIM	120V AC / 230V AC	3.9	380	φ 20 x 54	15	0.9	80 / 90 / 95	4/6
6	FR-G9-3.5W-028DIM	120V AC / 230V AC	3.2	380	φ 19 x 68	12	0.9	80 / 90 / 95	4/6
7	FR-G9-7W-012DIM	120V AC / 230V AC	6.8	800	φ 40 x 40	51	0.9	80 / 90 / 95	4/6
8	FR-G9-3W-034DIM	120V AC / 230V AC	3.0	280	φ 20 x 37	13	0.9	80 / 90 / 95	4/6
9	FR-G9-3W-0XXDIM	120V AC / 230V AC	3.0	160	φ 19 x 50	14	0.9	80 / 90 / 95	4/6
10	FR-G9-3.5W-034DIM	120V AC / 230V AC	3.2	320	φ 18 x 50	13	0.9	80 / 90 / 95	4/6
11	FR-G9-3.5W-018DIM	120V AC / 230V AC	3.2	300	φ 30 x 32	15	0.9	80 / 90 / 95	4/6

*JA8 & TITL20 PASS

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K



DIMMABLE



CCT-CHANGEABLE

Flicker Free | Ceramic+PC | 3 Years Warranty
 CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE
 Suitable for use in damp locations
 Suitable for use in totally enclosed lighting fixture



No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CCT (K) Changeable	CRI	SDCM
1	FR-G9-2.5W-015DTW	120V AC / 230V AC	2.4	230	φ 16 x 38	7	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
2	FR-G9-4W-010DTW	120V AC / 230V AC	3.8	370	φ 18 x 49	12	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
3	FR-G9-5W-019DTW	230V AC	5.1	550	φ 18 x 57	17	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
4	FR-G9-6W-012DTW	120V AC / 230V AC	5.3	720	φ 20 x 57	20	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
5	FR-G9-6.5W-001DTW	120V AC / 230V AC	5.8	800	φ 19 x 77	23	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
6	FR-G9-2.5W-010DTW	120V AC / 230V AC	2.5	230	φ 16 x 48	7	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
7	FR-G9-3.5W-021DTW	120V AC / 230V AC	3.4	310	φ 18 x 50	11	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
8	FR-G9-4.5W-021DTW	120V AC / 230V AC	3.9	380	φ 20 x 54	20	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
9	FR-G9-4W-031SW-D	120V AC / 230V AC	3.8	420	φ 19 x 55	11	0.9	Yes / 3-Step CCT Selector on Lamp	80 / 90 / 95	4/6
10	FR-G9-5W-021SW-D	120V AC / 230V AC	4.6	650	φ 21 x 59	19	0.9	Yes / 3-Step CCT Selector on Lamp	80 / 90 / 95	4/6
2	FR-G9-4W-032ED	120V AC / 230V AC	3.6	320	φ 18 x 49	12	0.9	Yes / 3-Step CCT with On/Off Switch	80 / 90 / 95	4/6
11	FR-G9-4W-037MSDIM	120V AC / 230V AC	0.5 1.8 3.6	65 230 460	φ 18 X 49	11	0.9	Yes / 3-Step CCT with No Switch	80 / 90 / 95	4/6
2	FR-G9-4W-010MSDTW	120V AC / 230V AC	1.0 2.2 3.8	90 200 340	φ 18 X 49	12	0.9	Yes / 3-Step CCT with On/Off Switch	80 / 90 / 95	4/6

*JA8 & TITL20 PASS

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K



NON-DIMMABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		

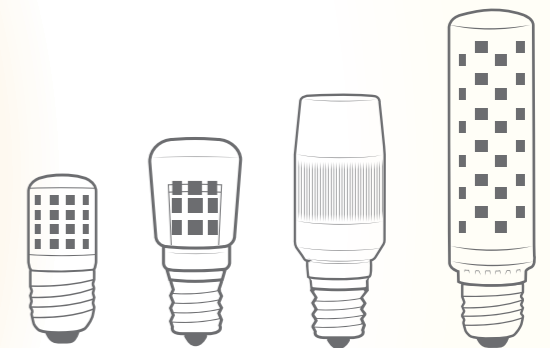


No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-G9-2.5W-001	120V AC / 230V AC	2.5	290	Φ 16 x 42	10	0.5	80 / 90 / 95	4/6
2	FR-G9-3W-002	120V AC / 230V AC	2.9	340	Φ 16 x 45	11	0.5	80 / 90 / 95	4/6
3	FR-G9-3.5W-016	120V AC / 230V AC	3.3	400	Φ 18 x 50	12	0.5	80 / 90 / 95	4/6
4	FR-G9-3.5W-024	120V AC / 230V AC	3.4	390	Φ 17 x 42	11	0.5	80 / 90 / 95	4/6
5	FR-G9-4.5W-013	120V AC / 230V AC	4.2	520	Φ 17 x 53	12	0.5	80 / 90 / 95	4/6
6	FR-G9-4.8W-001	120V AC / 230V AC	4.8	700	Φ 19 x 49	12	0.5	80 / 90 / 95	4/6
7	FR-G9-5W-011	120V AC / 230V AC	4.7	600	Φ 18 x 57	16	0.5	80 / 90 / 95	4/6
7	FR-G9-6W-005	120V AC / 230V AC	5.3	700	Φ 18 x 57	17	0.7	80 / 90 / 95	4/6
8	FR-G9-6.5W-002	120V AC / 230V AC	6.1	850	Φ 19 x 77	23	0.7	80 / 90 / 95	4/6
9	FR-G9-2W-014SW-RGB	120V AC / 230V AC	1.9	50-R/180-G 30-B	Φ 19 x 55	11	0.5	80 / 90 / 95	4/6
10	FR-G9-3.5W-005	120V AC / 230V AC	3.2	310	Φ 30 x 32	15	0.5	80 / 90 / 95	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

EDISON

E11/E12/E14/E17



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		



No.	ITEM N/O	Base	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-CDL-2.5W-005DIM	E11, E12, E14, E17	120V AC / 230V AC	2.5	260	φ 16 x 45	10	0.9	80 / 90 / 95	4/6
2	FR-CDL-3W-005DIM	E11, E12, E14, E17	120V AC / 230V AC	2.9	290	φ 16 x 48	12	0.9	80 / 90 / 95	4/6
3	FR-CDL-3.5W-014DIM	E11, E12, E14, E17	120V AC / 230V AC	3.4	360	φ 18 x 52	15	0.9	80 / 90 / 95	4/6
4	FR-CDL-3.5W-019DIM	E11, E12, E14, E17	120V AC / 230V AC	3.3	380	φ 17 x 44	14	0.9	80 / 90 / 95	4/6
5	FR-CDL-4W-010DIM	E14	230V AC	3.8	410	φ 18 x 55	14	0.9	80 / 90 / 95	4/6
6	FR-CDL-4W-011DIM	E11, E12, E17	120V AC	4.0	400	φ 18 x 53	15	0.9	80 / 90 / 95	4/6
6	FR-CDL-4.5W-019DIM	E11, E12, E14, E17	120V AC / 230V AC	4.1	480	φ 18 x 53	15	0.9	80 / 90 / 95	4/6
7	FR-CDL-6W-004DIM	E11, E12, E14, E17	120V AC / 230V AC	5.1	630	φ 18 x 60	17	0.9	80 / 90 / 95	4/6
8	FR-CDL-5W-008DIM	E11, E12, E14, E17	120V AC / 230V AC	4.7	580	φ 18 x 60	17	0.9	80 / 90 / 95	4/6
8	FR-CDL-6W-012DIM	E11, E12, E14, E17	120V AC / 230V AC	5.3	720	φ 20 x 60	20	0.9	80 / 90 / 95	4/6
9	FR-CDL-6.5W-001DIM	E11, E12, E14, E17	120V AC / 230V AC	5.8	800	φ 19 x 81	24	0.9	80 / 90 / 95	4/6
9	FR-CDL-7W-008DIM	E11, E12, E14, E17	120V AC / 230V AC	6.5	900	φ 19 x 81	26	0.9	80 / 90 / 95	4/6
10	FR-CDL-8W-009DIM	E11, E12, E14, E17	120V AC / 230V AC	7.8	1100	φ 18 x 91	38	0.9	80 / 90 / 95	4/6

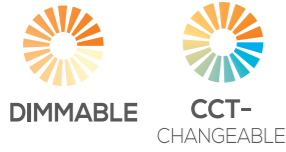
*JA8 & TITLE20 PASS



No.	ITEM N/O	Base	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
11	FR-CDL-7W-001DIM	E11, E12, E14, E17	120V AC / 230V AC	6.8	950	φ 25 x 96	40	0.9	80 / 90 / 95	4/6
12	FR-CDL-8W-004DIM	E11, E12, E14	120V AC / 230V AC	7.8	1000	φ 28 x 99	53	0.9	80 / 90 / 95	4/6
13	FR-CDL-10W-002DIM	E11, E12, E14	120V AC / 230V AC	9.5	1200	φ 28 x 115	62	0.9	80 / 90 / 95	4/6
14	FR-CDL-2.5W-010DIM	E11, E12, E14, E17	120V AC / 230V AC	2.5	230	φ 16 x 49	8	0.9	80 / 90 / 95	4/6
15	FR-CDL-3.5W-021DIM	E11, E12, E14, E17	120V AC / 230V AC	3.4	310	φ 18 x 64	15	0.9	80 / 90 / 95	4/6
16	FR-CDL-4.5W-021DIM	E11, E12, E14, E17	120V AC / 230V AC	4.1	380	φ 20 x 55	15	0.9	80 / 90 / 95	4/6
17	FR-CDL-3.5W-028DIM	E11, E12, E14, E17	120V AC / 230V AC	3.2	380	φ 19 x 72	13	0.9	80 / 90 / 95	4/6
18	FR-E14-7W-007DIM	E14	120V AC / 230V AC	6.5	710	φ 50 x 73	75	0.9	80 / 90 / 95	4/6
19	FR-CDL-7W-012DIM	E11, E12, E14, E17	120V AC / 230V AC	6.8	800	φ 40 x 43	53	0.9	80 / 90 / 95	4/6

*JA8 & TITLE20 PASS

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K



Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		



No.	ITEM N/O	Base	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CCT(K) Changeable	CRI	SDCM
1	FR-CDL-2.5W-015DTW	E11,E12,E14	120V AC / 230V AC	2.4	230	Φ 16 x 42	9.0	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
2	FR-CDL-4W-010DTW	E11,E12,E14	120V AC / 230V AC	3.8	370	Φ 18 x 55	14	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
3	FR-CDL-5W-019DTW	E11,E12,E14	230V AC	5.1	550	Φ 18 x 62	19	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
4	FR-CDL-6W-012DTW	E11,E12,E14	120V AC / 230V AC	5.3	720	Φ 20 x 60	22	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
5	FR-CDL-6.5W-001DTW	E11,E12,E14	120V AC / 230V AC	5.8	800	Φ 19 x 83	25	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
6	FR-CDL-10W-013DTW	E11,E12,E14	120V AC / 230V AC	9.5	1200	Φ 28 x 103	91	0.9	Yes/Smooth transition	80 / 90 / 95	4/6

*JA8 & TITL20 PASS



No.	ITEM N/O	Base	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CCT(K) Changeable	CRI	SDCM
7	FR-CDL-2.5W-010DTW	E11,E12,E14,E17	120V AC / 230V AC	2.5	230	Φ 16 x 51	8.0	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
8	FR-CDL-3.5W-021DTW	E11,E12,E14,E17	120V AC / 230V AC	3.4	310	Φ 18 x 66	11	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
9	FR-CDL-4.5W-021DTW	E11,E12,E14,E17	120V AC / 230V AC	4.1	380	Φ 20 x 57	20	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
10	FR-E14-7W-002DTW	E14	120V AC / 230V AC	6.5	720	Φ 50 x 73	75	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
10	FR-E14-7W-007DTW	E14	120V AC / 230V AC	6.5	620	Φ 50 x 73	75	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
11	FR-CDL-4W-032ED	E11,E12,E14	120V AC / 230V AC	3.6	320	Φ 18 x 55	14	0.9	Yes / 3-Step CCT with On/Off Switch	80 / 90 / 95	4/6

*JA8 & TITL20 PASS

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K



Flicker Free | Ceramic+PC | 3 Years Warranty
 CE, EMC, New ErP, ETL, FCC, SAA, PSE
 Suitable for use in damp locations
 Suitable for use in totally enclosed lighting fixture



No.	ITEM N/O	Base	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-CDL-1.2W-001	E14	120V AC / 230V AC	1.2	100	φ 16 X 30	13	0.5	80/90/95	4/6
2	FR-CDL-2W-006	E14	230V AC	2.1	230	φ 15 X 47	13	0.5	80/90/95	4/6
3	FR-CDL-2.5W-001	E11,E12,E14,E17	120V AC / 230V AC	2.4	280	φ 16 X 45	10	0.5	80/90/95	4/6
4	FR-CDL-3W-002	E11,E12,E14,E17	120V AC / 230V AC	2.9	340	φ 16 X 48	12	0.5	80/90/95	4/6
5	FR-CDL-3.5W-016	E11,E12,E14,E17	120V AC / 230V AC	3.3	400	φ 18 X 52	14	0.5	80/90/95	4/6
6	FR-CDL-3.5W-024	E11,E12,E14,E17	120V AC / 230V AC	3.4	390	φ 17 X 44	13	0.5	80/90/95	4/6
7	FR-CDL-4.5W-013	E11,E12,E14,E17	120V AC / 230V AC	4.2	520	φ 17 X 56	17	0.5	80/90/95	4/6
8	FR-CDL-5W-011	E11,E12,E14,E17	120V AC / 230V AC	4.7	600	φ 18 X 60	17	0.5	80/90/95	4/6
8	FR-CDL-6W-005	E11,E12,E14,E17	120V AC / 230V AC	5.3	700	φ 18 X 60	17	0.7	80/90/95	4/6
9	FR-CDL-6.5W-002	E11,E12,E14,E17	120V AC / 230V AC	6.1	850	φ 19 X 81	25	0.7	80/90/95	4/6
10	FR-CDL-7W-002	E11,E12,E14,E17	120V AC / 230V AC	6.8	1000	φ 25 X 96	40	0.7	80/90/95	4/6

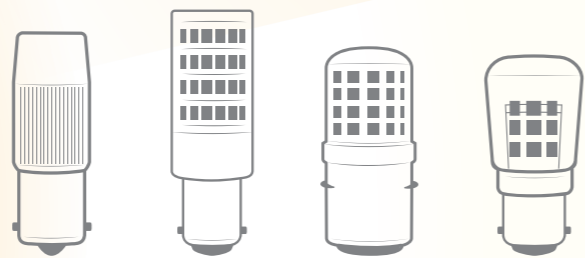


No.	ITEM N/O	Base	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
11	FR-CDL-8W-003	E11,E12,E14	100-240V AC	7.8	1000	φ 28 X 99	53	0.9	80/90/95	4/6
12	FR-CDL-10W-004	E11,E12,E14	100-240V AC	9.5	1200	φ 28 X 115	62	0.9	80/90/95	4/6
13	FR-E14S-2W-007	E14S	120V AC / 230V AC	2.0	180	φ 23 X 53	13	0.5	80/90/95	4/6
14	FR-E12-2W-007	E12	120V AC / 230V AC	2.0	180	φ 23 X 51	14	0.5	80/90/95	4/6
15	FR-CDL-2.5W-006	E11,E12,E14	120V AC / 230V AC	2.4	280	φ 20 X 46	12	0.5	80/90/95	4/6
16	FR-CDL-3W-006	E11,E12,E14	120V AC / 230V AC	2.9	300	φ 23 X 56	18	0.5	80/90/95	4/6
17	FR-E14-3W-013-G45	E14	12V AC/DC	2.8	300	φ 45 X 68	31	0.7	80/90/95	4/6
18	FR-E17-3W-013-G45	E17	12V AC/DC	2.8	300	φ 45 X 68	31	0.7	80/90/95	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

BA15d

SERIES



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



Flicker Free | Ceramic+PC | 3 Years Warranty
 CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE
 Suitable for use in damp locations
 Suitable for use in totally enclosed lighting fixture



1 2 3 4



5 6 7 8 9 10 11 12

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-BA15d-2.5W-005DIM	120V AC / 230V AC	2.4	250	φ 17 x 44	14	0.9	80 / 90 / 95	4/6
2	FR-BA15d-2.5W-005DIM	120V AC / 230V AC	2.4	250	φ 20 x 45	15	0.9	80 / 90 / 95	4/6
1	FR-BA15d-3W-005DIM	120V AC / 230V AC	2.9	290	φ 17 x 44	14	0.9	80 / 90 / 95	4/6
2	FR-BA15d-3W-005DIM	120V AC / 230V AC	2.9	290	φ 20 x 45	15	0.9	80 / 90 / 95	4/6
3	FR-BA15d-3.5W-014DIM	120V AC / 230V AC	3.4	360	φ 17 x 52	16	0.9	80 / 90 / 95	4/6
4	FR-BA15d-3.5W-019DIM	120V AC / 230V AC	3.3	380	φ 17 x 44	16	0.9	80 / 90 / 95	4/6
5	FR-BA15d-4W-012DIM	120V AC / 230V AC	4.0	500	φ 18 x 59	21	0.9	80 / 90 / 95	4/6
6	FR-BA15d-6W-004DIM	120V AC / 230V AC	5.1	630	φ 18 x 59	22	0.9	80 / 90 / 95	4/6
7	FR-BA15d-5W-008DIM	120V AC / 230V AC	4.7	580	φ 18 x 59	22	0.9	80 / 90 / 95	4/6
7	FR-BA15d-6W-011DIM	120V AC / 230V AC	5.3	700	φ 18 x 59	22	0.9	80 / 90 / 95	4/6
8	FR-BA15d-6.5W-001DIM	120V AC / 230V AC	5.8	800	φ 19 x 80	27	0.9	80 / 90 / 95	4/6
8	FR-BA15d-7W-008DIM	120V AC / 230V AC	6.5	900	φ 19 x 80	36	0.9	80 / 90 / 95	4/6
9	FR-BA15d-10W-002DIM	120V AC / 230V AC	9.5	1200	φ 28 x 113	66	0.9	80 / 90 / 95	4/6
10	FR-BA15d-2.5W-010DIM	120V AC / 230V AC	2.5	230	φ 16 x 49	11	0.9	80 / 90 / 95	4/6
11	FR-BA15d-3.5W-021DIM	120V AC / 230V AC	3.4	310	φ 18 x 52	14	0.9	80 / 90 / 95	4/6
12	FR-BA15d-4.5W-021DIM	120V AC / 230V AC	4.1	380	φ 20 x 56	26	0.9	80 / 90 / 95	4/6

*JA8 & TITLE20 PASS

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K



NON-DIMMABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		

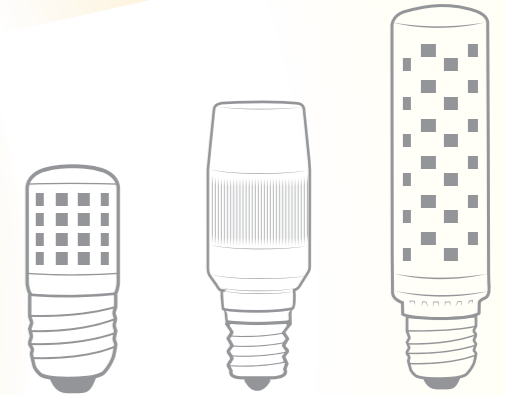


No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-BA15d-2W-006	120V AC / 230V AC	2.1	260	φ 17 x 47	14	0.5	80 / 90 / 95	4/6
2	FR-BA15d-2W-008	120V AC / 230V AC	2.1	230	φ 23 x 53	18	0.5	80 / 90 / 95	4/6
3	FR-BA15d-2.5W-006	120V AC / 230V AC	2.4	250	φ 20 x 45	15	0.5	80 / 90 / 95	4/6
4	FR-BA15d-3W-002	120V AC / 230V AC	2.9	340	φ 17 x 44	11	0.5	80 / 90 / 95	4/6
5	FR-BA15d-3.5W-016	120V AC / 230V AC	3.3	400	φ 17 x 52	16	0.5	80 / 90 / 95	4/6
6	FR-BA15d-3.5W-024	120V AC / 230V AC	3.4	390	φ 17 x 44	15	0.5	80 / 90 / 95	4/6
7	FR-BA15d-4.5W-013	120V AC / 230V AC	4.2	520	φ 17 x 55	19	0.5	80 / 90 / 95	4/6
8	FR-BA15d-6W-005	120V AC / 230V AC	5.3	700	φ 18 x 59	22	0.7	80 / 90 / 95	4/6
9	FR-BA15d-6.5W-002	120V AC / 230V AC	6.1	850	φ 19 x 80	27	0.7	80 / 90 / 95	4/6
10	FR-BA15d-2W-007	120V AC / 230V AC	2.0	180	φ 23 x 52	17	0.5	80 / 90 / 95	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

E26/E27

SERIES



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



Flicker Free | Ceramic+PC | 3 Years Warranty
 CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE
 Suitable for use in damp locations
 Suitable for use in totally enclosed lighting fixture



No.	ITEM N/O	Base	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CCT (K) Changeable	CRI	SDCM
1	FR-E27-3.5W-026DIM	E26,E27	120V AC / 230V AC	3.5	250	φ28 x 45	31	0.9	NO	80 / 90 / 95	4/6
2	FR-E27-5W-018DIM	E26,E27	120V AC / 230V AC	4.7	500	φ27 x 60	25	0.9	NO	80 / 90 / 95	4/6
3	FR-E27-5W-009DIM	E26,E27	120V AC / 230V AC	4.5	600	φ27 x 60	44	0.9	NO	80 / 90 / 95	4/6
4	FR-E27-7W-012DIM	E26,E27	120V AC / 230V AC	6.8	900	φ40 x 50	41	0.9	NO	80 / 90 / 95	4/6
5	FR-E27-8W-004DIM	E26,E27	120V AC / 230V AC	7.6	1100	φ28 x 99	55	0.9	NO	80 / 90 / 95	4/6
6	FR-E27-10W-002DIM	E26,E27	120V AC / 230V AC	9.5	1200	φ28 x 113	64	0.9	NO	80 / 90 / 95	4/6
6	FR-E27-12W-001DIM	E26,E27	230V AC	11.5	1500	φ28 x 113	64	0.9	NO	80 / 90 / 95	4/6
7	FR-E27-14W-007DIM	E26,E27	230V AC	13.1	1800	φ28 x 99	103	0.9	NO	80 / 90 / 95	4/6
8	FR-E27-15W-001DIM	E26,E27	120V AC / 230V AC	13.5	2000	φ35 x 150	180	0.9	NO	80 / 90 / 95	4/6
9	FR-E27-20W-001DIM	E26,E27	120V AC / 230V AC	20.0	2700	φ35 x 150	186	0.9	NO	80 / 90 / 95	4/6
10	FR-E27-8W-005DIM	E26,E27	120V AC / 230V AC	7.8	930	φ35 x 100	63	0.9	NO	80 / 90 / 95	4/6
2	FR-E27-5W-018DTW	E26,E27	120V AC / 230V AC	4.7	560	φ28 x 60	26	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
11	FR-E27-5W-009DTW	E26,E27	120V AC / 230V AC	4.5	600	φ27 x 60	44	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
12	FR-E27-10W-013DTW	E26,E27	120V AC / 230V AC	9.5	1200	φ28 x 99	103	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
13	FR-E27-20W-001DTW	E26,E27	120V AC / 230V AC	20.0	2700	φ35 x 150	186	0.9	Yes/Smooth transition	80 / 90 / 95	4/6
14	FR-E27-8W-00XSW-3CCT	E26,E27	120V AC / 230V AC	7.8	930	φ36 x 100	63	0.9	Yes / 3-Step CCT Selector on Lamp	80 / 90 / 95	4/6
2	FR-E26D-5W-024DIM	E26D	120V AC / 230V AC	1.6 3.1 4.7	150 290 440	φ28 X 58	26	0.9	NO	80 / 90 / 95	4/6
10	FR-E26D-8W-006DIM	E26D	120V AC / 230V AC	2.9 4.8 7.8	300 550 840	φ35 X 98	63	0.9	NO	80 / 90 / 95	4/6

*JA8 & TITLE20 PASS

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K



Flicker Free | Ceramic+PC | 3 Years Warranty
 CE, EMC, New ErP, ETL, FCC, SAA, PSE
 Suitable for use in damp locations
 Suitable for use in totally enclosed lighting fixture



No.	ITEM N/O	Base	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-E27-3.5W-00X	E26,E27	120V AC / 230V AC	3.5	250	φ28 x 45	31	0.5	80/90/95	4/6
2	FR-E27-5W-00X	E26,E27	120V AC / 230V AC	4.7	500	φ27 x 60	24	0.5	80/90/95	4/6
3	FR-E27-5W-005	E26,E27	10-30V AC/DC	4.2	520	φ27 x 60	44	0.7	80/90/95	4/6
3	FR-E27-5W-006	E26,E27	100-240V AC	4.5	600	φ27 x 60	44	0.5	80/90/95	4/6
5	FR-E27-8W-003	E26,E27	100-240V AC	7.8	1000	φ28 x 99	55	0.9	80/90/95	4/6
6	FR-E27-10W-004	E26,E27	100-240V AC	9.5	1200	φ28 x 113	64	0.9	80/90/95	4/6
6	FR-E27-12W-00X	E26,E27	100-240V AC	11.5	1500	φ28 x 113	64	0.9	80/90/95	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

B22

SERIES



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



DIMMABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-B22-5W-009DIM	120V AC / 230V AC	4.5	600	Φ27 x 59	34	0.9	80 / 90 / 95	4/6
2	FR-B22-8W-004DIM	120V AC / 230V AC	7.6	1100	Φ28 x 97	55	0.9	80 / 90 / 95	4/6
3	FR-B22-10W-002DIM	120V AC / 230V AC	9.5	1200	Φ28 x 111	64	0.9	80 / 90 / 95	4/6
3	FR-B22-12W-001DIM	230V AC	11.5	1500	Φ28 x 111	64	0.9	80 / 90 / 95	4/6

*JA8 & TITLE20 PASS



NON - DIMMABLE

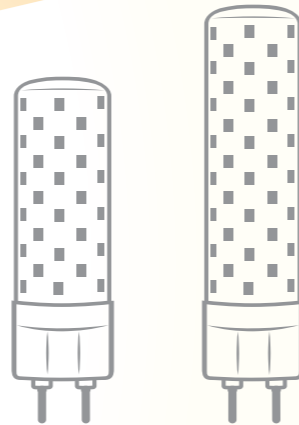
Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-B22-5W-005	10-30V AC/DC	4.2	520	Φ27 x 59	34	0.7	80 / 90 / 95	4/6
1	FR-B22-5W-006	100-240V AC	4.5	600	Φ27 x 59	34	0.5	80 / 90 / 95	4/6
2	FR-B22-8W-003	100-240V AC	7.8	1000	Φ28 x 97	55	0.9	80 / 90 / 95	4/6
3	FR-B22-10W-004	100-240V AC	9.5	1200	Φ28 x 111	64	0.9	80 / 90 / 95	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

G12

SERIES



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



1

2

3



DIMMABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-G12-8W-004DIM	120V AC / 230V AC	7.6	1100	Φ30 x 99	53	0.9	80 / 90 / 95	4/6
2	FR-G12-10W-002DIM	120V AC / 230V AC	9.5	1200	Φ30 x 113	63	0.9	80 / 90 / 95	4/6
2	FR-G12-12W-001DIM	230V AC	11.5	1500	Φ30 x 113	63	0.9	80 / 90 / 95	4/6
3	FR-G12-14W-007DIM	230V AC	13.1	1800	Φ30 x 99	92	0.9	80 / 90 / 95	4/6

*JA8 & TITLE20 PASS



NON - DIMMABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-G12-8W-003	100-240V AC/DC	7.8	1000	Φ30 x 99	53	0.9	80 / 90 / 95	4/6
2	FR-G12-10W-004	100-240V AC/DC	9.5	1200	Φ30 x 113	63	0.9	80 / 90 / 95	4/6
2	FR-G12-12W-00X	100-240V AC/DC	11.5	1500	Φ30 x 113	63	0.9	80 / 90 / 95	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

GU24

GX24Q/GX23-2



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



Flicker Free | Ceramic+PC | 3 Years Warranty
 CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE
 Suitable for use in damp locations
 Suitable for use in totally enclosed lighting fixture

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CCT(K) Changeable	CRI	SDCM
1	FR-GU24-5W-009DIM	120V AC / 230V AC	4.5	600	φ33 x 48	48	0.9	NO	80 / 90 / 95	4/6
3	FR-GU24-10W-002DIM	120V AC / 230V AC	9.5	1200	φ33 x 96	65	0.9	NO	80 / 90 / 95	4/6
4	FR-GU24-10W-008DIM	120V AC / 230V AC	9.9	1200	φ75 x 58	163	0.9	NO	80 / 90 / 95	4/6
4	FR-GU24-9W-003DTW	120V AC / 230V AC	9.0	1200	φ75 x 58	168	0.9	Yes/Smooth transition	80 / 90 / 95	4/6

*JA8 & TITL20 PASS



NON-DIMMABLE

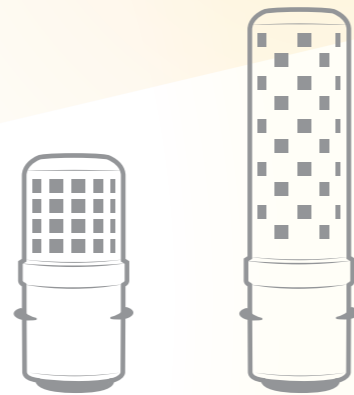
Flicker Free | Ceramic+PC | 3 Years Warranty
 CE, EMC, New ErP, ETL, FCC, SAA, PSE
 Suitable for use in damp locations
 Suitable for use in totally enclosed lighting fixture

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-GU24-5W-006	100-240V AC	4.5	600	φ33 x 48	48	0.5	80 / 90 / 95	4/6
2	FR-GU24-8W-003	100-240V AC	7.8	1000	φ33 x 83	55	0.9	80 / 90 / 95	4/6
3	FR-GU24-10W-004	100-240V AC	9.5	1200	φ33 x 96	65	0.9	80 / 90 / 95	4/6
4	FR-GU24-10W-009	120V AC / 230V AC	10.0	1100	φ75 x 58	165	0.7	80 / 90 / 95	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

P28s

SERIES



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



1



DIMMABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-P28S-10W-002DIM	120V AC / 230V AC	9.5	1150	Φ34 x 119	77	0.9	80 / 90 / 955	4/6

*JA8 & TITLE20 PASS



NON-DIMMABLE

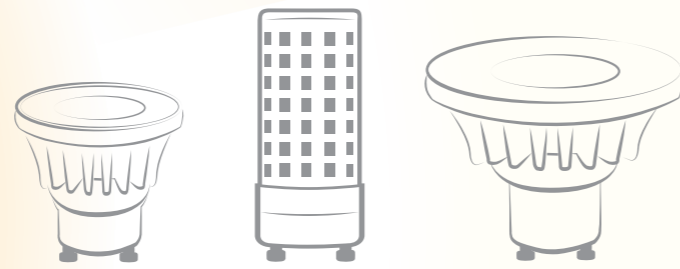
Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-P28S-10W-004	100-240V AC	9.5	1250	Φ34 x 119	77	0.9	80 / 90 / 955	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

GU10

SERIES



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



DIMMABLE



CCT-CHANGEABLE

Flicker Free | Ceramic+PC | 3 Years Warranty
 CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE
 Suitable for use in damp locations
 Suitable for use in totally enclosed lighting fixture

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CCT(K) Changeable	CRI	SDCM	Degree
1	FR-GU10-5W-003DIM	120V AC / 230V AC	4.5	600	Φ22 x 53	27	0.9	NO	80 / 90 / 95	4/6	
2	FR-GU10-5W-009DIM	120V AC / 230V AC	4.5	600	Φ27 x 52	25	0.9	NO	80 / 90 / 95	4/6	
3	FR-GU10-4W-040DIM	120V AC / 230V AC	4.0	420	Φ35 x 46	36	0.9	NO	80 / 90 / 95	4/6	24°/36°/60°
3	FR-GU10-4W-043DIM	120V AC / 230V AC	4.0	350	Φ35 x 46	36	0.9	NO	80 / 90 / 95	4/6	
4	FR-GU10-3W-025DIM	120V AC / 230V AC	3.0	350	Φ50 x 54	52	0.9	NO	80 / 90 / 95	4/6	10°/15°/24° 36°/60°/120°
4	FR-GU10-5W-017DIM	120V AC / 230V AC	5.0	550	Φ50 x 54	52	0.9	NO	80 / 90 / 95	4/6	
4	FR-GU10-5W-031DIM	120V AC / 230V AC	4.8	380	Φ50 x 54	50	0.9	NO	80 / 90 / 95	4/6	36°/60°
4	FR-GU10-7W-002DIM	120V AC / 230V AC	6.5	720	Φ50 x 54	52	0.9	NO	80 / 90 / 95	4/6	
4	FR-GU10-7W-007DIM	120V AC / 230V AC	6.5	620	Φ50 x 54	52	0.9	NO	80 / 90 / 95	4/6	10°/15°/24° 36°/60°/120°
4	FR-GU10-8W-007DIM	120V AC / 230V AC	7.5	850	Φ50 x 54	71	0.9	NO	80 / 90 / 95	4/6	
5	FR-AR70-GU10-7W-009DIM	120V AC / 230V AC	6.8	850	Φ70 x 63	113	0.9	NO	80 / 90 / 95	4/6	10°/24° 36°/60°
3	FR-GU10-4W-040DTW	120V AC / 230V AC	4.0	400	Φ35 x 46	36	0.9	YES /SMOOTH TRANSITION	80 / 90 / 95	4/6	
3	FR-GU10-4W-043DTW	120V AC / 230V AC	4.0	330	Φ35 x 46	36	0.9	YES /SMOOTH TRANSITION	80 / 90 / 95	4/6	24°/36°/60°
4	FR-GU10-5W-017DTW	120V AC / 230V AC	5.0	520	Φ50 x 54	52	0.9	YES /SMOOTH TRANSITION	80 / 90 / 95	4/6	
4	FR-GU10-7W-002DTW	120V AC / 230V AC	6.5	700	Φ50 x 54	52	0.9	YES /SMOOTH TRANSITION	80 / 90 / 95	4/6	
4	FR-GU10-7W-007DTW	120V AC / 230V AC	6.5	620	Φ50 x 54	52	0.9	YES /SMOOTH TRANSITION	80 / 90 / 95	4/6	
6	FR-MR16-GU10-7W-015SWD-3CCT	120V AC / 230V AC	6.5	750	Φ50 x 54	54	0.9	YES / 3 STEP CCT SELECTOR ON LAMP	80 / 90 / 95	4/6	10°/15°/24° 36°/60°/120°
6	FR-MR16-GU10-3.5W-036SWD-RGB	120V AC / 230V AC	3.3	80-R 180-G 35-B	Φ50 X 54	54	0.9	YES / 3 STEP CCT SELECTOR ON LAMP	80 / 90 / 95	4/6	
6	FR-MR16-GU10-3.5W-038SWD-RGBA	120V AC / 230V AC	3.6	110-R 230-G 70-B 340-A	Φ50 X 54	54	0.9	YES / 4 STEP CCT SELECTOR ON LAMP	80 / 90 / 95	4/6	
3	FR-GU10-4W-043MSDTW	120V AC / 230V AC	1.0 2.2 3.9	43 170 340	Φ35 X 46	36	0.9	Yes / 3-Step CCT with On/Off Switch	80 / 90 / 95	4/6	24°/36°/60°
4	FR-GU10-7W-007MSDTW	120V AC / 230V AC	1.2 3.7 6.8	72 350 730	Φ50 X 54	52	0.9	Yes / 3-Step CCT with On/Off Switch	80 / 90 / 95	4/6	10°/15°/24° 36°/60°/120°

*JA8 & TITLE20 PASS



NON-DIMMABLE

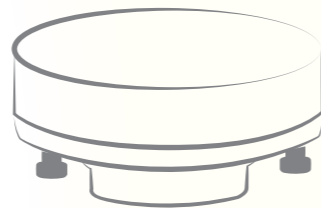
Flicker Free | Ceramic+PC | 3 Years Warranty
 CE, EMC, New ErP, ETL, FCC, SAA, PSE
 Suitable for use in damp locations
 Suitable for use in totally enclosed lighting fixture

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM	Degree
1	FR-GU10-5W-002	120V AC / 230V AC	4.5	600	Φ22 x 53	27	0.5	80 / 90 / 95	4/6	
2	FR-GU10-5W-006	100-240V AC/DC	4.5	600	Φ27 x 52	25	0.5	80 / 90 / 95	4/6	
4	FR-GU10-5W-025	120V AC / 230V AC	5.1	560	Φ50 x 54	52	0.5	80 / 90 / 95	4/6	
4	FR-GU10-7W-014	120V AC / 230V AC	6.5	750	Φ50 x 54	52	0.7	80 / 90 / 95	4/6	10°/15°/24° 36°/60°/120°
4	FR-GU10-8W-009	120V AC / 230V AC	7.8	850	Φ50 x 54	52	0.7	80 / 90 / 95	4/6	

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

GX53

SERIES



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



1



DIMMABLE

CCT-
CHANGEABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CCT(K) Changeable	CRI	SDCM
1	FR-GX53-6W-021DIM	230V AC	5.8	720	Φ75 x 31	50	0.9	NO	80 / 90 / 95	4/6
1	FR-GX53-7W-003DIM	230V AC	6.7	860	Φ75 x 31	93	0.9	NO	80 / 90 / 95	4/6
1	FR-GX53-7W-004DIM	230V AC	6.7	680	Φ75 x 31	90	0.9	NO	80 / 90 / 95	4/6
1	FR-GX53-7W-003DTW	120V AC / 230V AC	6.5	720	Φ75 x 31	93	0.9	Yes/Smooth transition	80 / 90 / 95	4/6

*JA8 & TITL20 PASS

NON-
DIMMABLE

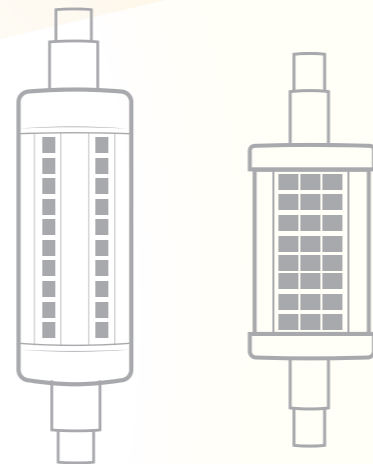
Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-GX53-7W-011	85-265V AC	6.8	700	Φ75 x 31	93	0.9	80 / 90 / 95	4/6
1	FR-GX53-10W-012	85-265V AC	9.5	1000	Φ75 x 31	93	0.9	80 / 90 / 95	4/6

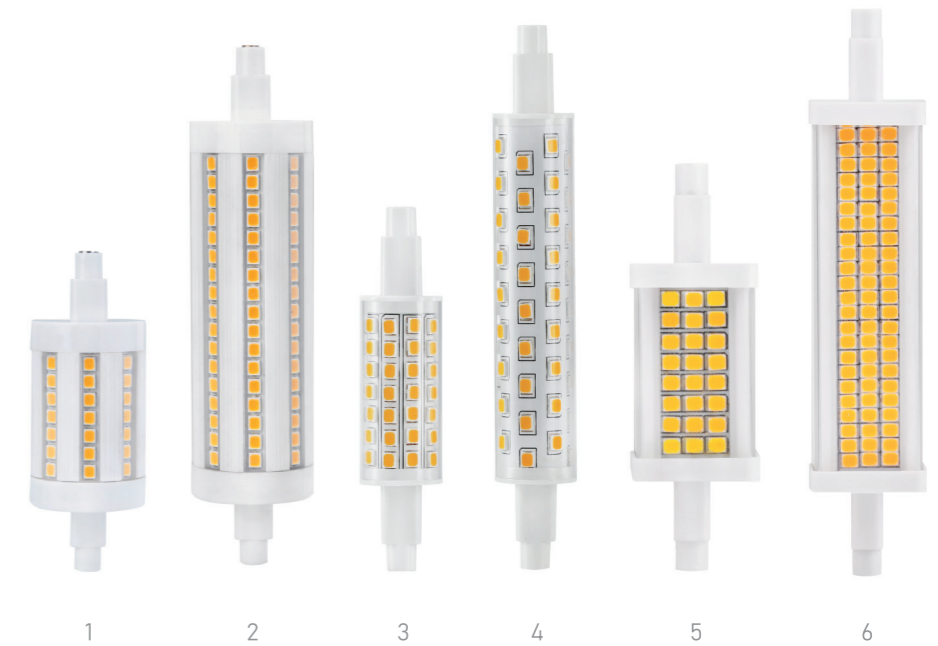
THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

R7s

SERIES



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



DIMMABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-R7S-6W-001DIM	120V AC / 230V AC	5.9	650	Φ28 x 78	38	0.9	80 / 90 / 95	4/6
2	FR-R7S-10W-001DIM	120V AC / 230V AC	9.7	1200	Φ28 x 118	80	0.9	80 / 90 / 95	4/6
2	FR-R7S-12W-002DIM	120V AC / 230V AC	11.5	1450	Φ28 x 118	80	0.9	80 / 90 / 95	4/6
3	FR-R7S-5W-016DIM	120V AC / 230V AC	5.0	580	Φ18 x 78	15	0.9	80 / 90 / 95	4/6
4	FR-R7S-9W-004DIM	120V AC / 230V AC	8.7	1100	Φ18 x 118	24	0.9	80 / 90 / 95	4/6
6	FR-R7S-10W-006DIM	120V AC / 230V AC	9.5	1000	24 x 22 x 118	46	0.9	80 / 90 / 95	4/6

*JA8 & TITLE20 PASS



NON-DIMMABLE

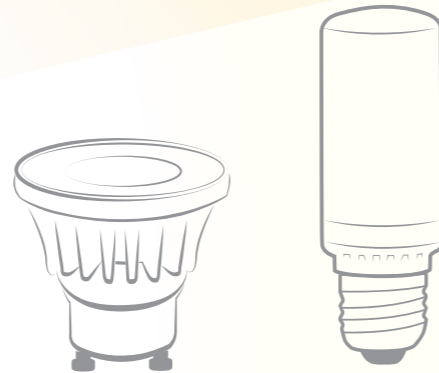
Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
2	FR-R7S-10W-001	100-240V AC	9.5	1100	Φ28 x 118	80	0.9	80 / 90 / 95	4/6
2	FR-R7S-12W-003	100-240V AC	11.5	1450	Φ28 x 118	80	0.9	80 / 90 / 95	4/6
5	FR-R7S-6W-007	120V AC / 230V AC	5.5	600	24 x 22 x 78	29	0.7	80 / 90 / 95	4/6
6	FR-R7S-10W-005	120V AC / 230V AC	9.5	1000	24 x 22 x 118	46	0.7	80 / 90 / 95	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

Switch CCT Bulb

SERIES



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		



1 2



3 4 5 6

No.	ITEM N/O	Base	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CCT(K) Changeable	CRI	SDCM	Degree
1	FR-G9-4W-031SWD	G9	120V AC / 230V AC	3.8	420	φ19 X 55	12	0.9	Yes / 3-Step CCT Selector on Lamp	80/90/95	4/6	
2	FR-G9-5W-021SWD	G9	120V AC / 230V AC	4.6	650	φ21 X 59	19	0.9	Yes / 3-Step CCT Selector on Lamp	80/90/95	4/6	
3	FR-G4-3W-029SWD	G4, GU4 GY6.35	12V AC/DC	2.8	330	φ18 X 50	11	0.9	Yes / 3-Step CCT Selector on Lamp	80/90/95	4/6	
4	FR-E27-8W-00XSW-3CCT	E27, E26	120V AC / 230V AC	7.8	930	φ36 X 100	63	0.9	Yes / 3-Step CCT Selector on Lamp	80/90/95	4/6	
5	FR-MR16-GU5.3-7W-016SWD-3CCT	MR16	12V AC/DC	3.5	750	φ50 X 54	58	0.9	Yes / 3-Step CCT Selector on Lamp	80/90/95	4/6	10°
5	FR-MR16-GU5.3-3.5W-037SWD-RGB	MR16	120V AC / 230V AC	6.5	80-R 200-G 35-B	φ50 X 47	54	0.9	Yes / 3-Step CCT Selector on Lamp	80/90/95	4/6	15°
5	FR-MR16-GU5.3-3.5W-039SWD-RGBY	MR16	12V AC/DC	3.3	100-R 200-G 70-B 380-Y	φ50 X 47	58	0.9	Yes / 4-Step CCT Selector on Lamp	80/90/95	4/6	24°
6	FR-MR16-GU10-7W-015SWD-3CCT	GU10	12V AC/DC	6.5	680	φ50 X 54	58	0.9	Yes / 3-Step CCT Selector on Lamp	80/90/95	4/6	36°
6	FR-MR16-GU10-3.5W-036SWD-RGB	GU10	120V AC / 230V AC	3.3	80-R 180-G 35-B	φ50 X 54	54	0.9	Yes / 3-Step CCT Selector on Lamp	80/90/95	4/6	120°
6	FR-MR16-GU10-3.5W-038SWD-RGBA	GU10	120V AC / 230V AC	3.6	110-R 230-G 70-B 340-A	φ50 X 54	54	0.9	Yes / 4-Step CCT Selector on Lamp	80/90/95	4/6	

*JA8 & TITLE20 PASS

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K



NON-DIMMABLE



CCT-CHANGEABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		



1



2



3



4



5



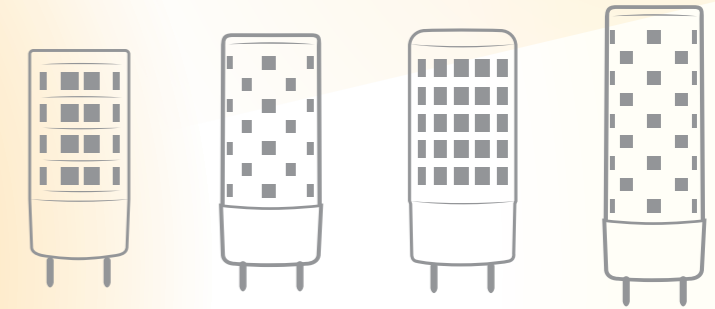
6

No.	ITEM N/O	Base	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CCT(K) Changeable	CRI	SDCM
1	FR-G4-3.5W-029SW-P	G4, GU4 GY6.35	12V AC/DC	3.5	360	φ19 X 46	10	0.7		80 / 90 / 95	4/6
2	FR-G4-4W-015SW-P	G4 GY6.35	12V AC/DC	3.6	430	φ19 X 45	10	0.7		80 / 90 / 95	4/6
1	FR-G4-3.5W-030SW-3CCT	G4, GU4 GY6.35	12V AC/DC	3.2	360	φ19 X 46	10	0.7	Yes / 3-Step CCT Selector on Lamp	80 / 90 / 95	4/6
3	FR-G4-4W-016SW-3CCT	G4, GU4 GY6.35	12V AC/DC	3.6	400	φ18 X 50	10	0.7	Yes / 3-Step CCT Selector on Lamp	80 / 90 / 95	4/6
4	FR-G4-2W-015SW-RGB	G4, GU4 GY6.35	12V AC/DC	1.9	35-R 110-G 32-B	φ19 X 45	10	0.7	Yes / 3-Step CCT Selector on Lamp	80 / 90 / 95	4/6
5	FR-G4-3W-037SW-RGBW	G4, GU4 GY6.35	12V AC/DC	2.7	56-R 132-G 32-B 310-W	φ18 X 50	11	0.7	Yes / 4-Step CCT Selector on Lamp	80 / 90 / 95	4/6
1	FR-G4-2.3W-002SW-RGB	G4, GU4 GY6.35	12V AC/DC	2.2	58-R 130-G 23-B	φ19 X 46	10	0.7	Yes / 3-Step CCT Selector on Lamp	80 / 90 / 95	4/6
6	FR-G9-2W-014SW-RGB	G9	120V AC / 230V AC	1.9	50-R 180-G 30-B	φ19 X 55	11	0.5	Yes / 3-Step CCT Selector on Lamp	80 / 90 / 95	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

G8

GY8/GY8.6



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



DIMMABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		



No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
1	FR-G8-2.5W-005DIM	120V AC / 230V AC	2.5	250	φ 16 x 39	8	0.9	80 / 90 / 95	4/6
1	FR-G8-3W-005DIM	120V AC / 230V AC	2.9	290	φ 16 x 39	8	0.9	80 / 90 / 95	4/6
2	FR-G8-3.5W-014DIM	120V AC / 230V AC	3.4	360	φ 17 x 41	11	0.9	80 / 90 / 95	4/6
3	FR-G8-3.5W-019DIM	120V AC / 230V AC	3.0	320	φ 16 x 39	10	0.9	80 / 90 / 95	4/6
4	FR-G8-4W-011DIM	120V AC	4.0	400	φ 18 x 42	12	0.9	80 / 90 / 95	4/6
4	FR-G8-4.5W-019DIM	120V AC / 230V AC	4.1	480	φ 18 x 42	12	0.9	80 / 90 / 95	4/6
5	FR-G8-5W-008DIM	120V AC / 230V AC	4.7	580	φ 18 x 47	15	0.9	80 / 90 / 95	4/6
5	FR-G8-6W-011DIM	120V AC / 230V AC	5.3	700	φ 18 x 47	15	0.9	80 / 90 / 95	4/6
9	FR-G8-6W-004DIM	120V AC / 230V AC	5.1	630	φ 18 x 47	14	0.9	80 / 90 / 95	4/6
10	FR-G8-6.5W-001DIM	120V AC / 230V AC	5.8	800	φ 19 x 68	19	0.9	80 / 90 / 95	4/6
10	FR-G8-7W-008DIM	120V AC / 230V AC	6.5	900	φ 19 x 68	19	0.9	80 / 90 / 95	4/6

*JA8 & TITL20 PASS

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K



NON-DIMMABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		

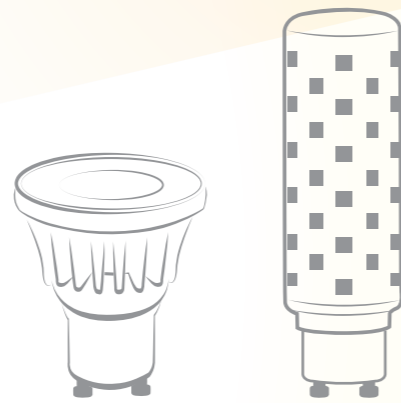


No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CRI	SDCM
6	FR-G8-2.5W-001	230V AC	2.5	290	φ 16 x 37	7	0.5	80 / 90 / 95	4/6
7	FR-G8-3.5W-016	120V AC / 230V AC	3.3	400	φ 17 x 41	10	0.5	80 / 90 / 95	4/6
8	FR-G8-4.5W-013	120V AC / 230V AC	4.2	520	φ 17 x 45	12	0.5	80 / 90 / 95	4/6
9	FR-G8-5W-011	120V AC / 230V AC	4.7	600	φ 18 x 47	13	0.5	80 / 90 / 95	4/6
9	FR-G8-6W-005	120V AC / 230V AC	5.3	700	φ 18 x 47	14	0.7	80 / 90 / 95	4/6
10	FR-G8-6.5W-002	120V AC / 230V AC	6.3	850	φ 19 x 68	19	0.7	80 / 90 / 95	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

Other base

GU6.5 / GX10 /
AR111 / LED module



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



Flicker Free | Ceramic+PC | 3 Years Warranty
CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE
Suitable for use in damp locations
Suitable for use in totally enclosed lighting fixture



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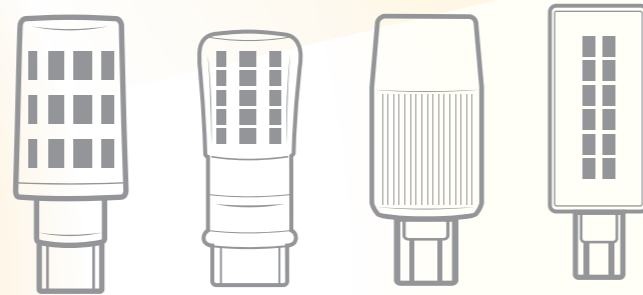
No.	ITEM N/O	Base	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CCT(K) Changeable	CRI	SDCM	Degree
1	FR-Gu6.5-6.5W-001DIM	GU6.5	120V AC / 230V AC	5.8	850	φ 19 x 66	21	0.9	NO	80 / 90 / 95	4/6	
2	FR-GX10-8W-007DIM	GX10	120V AC / 230V AC	7.6	850	φ 50 x 61	95	0.9	NO	80 / 90 / 95	4/6	10°/15°/24° 36°/60°/120°
3	FR-G53-9W-001DIM-AR111	G53	12V AC/DC	9.0	750	φ 111 x 66	150	0.9	NO	80 / 90 / 95	4/6	24° 40°
4	FR-GU10-9W-001DIM-AR111	GU10	120V AC / 230V AC	9.0	750	φ 111 x 72	165	0.9	NO	80 / 90 / 95	4/6	
5	FR-T50-7W-00XDIM		120V AC	7.0	730	φ 50 x 50	240	0.9	NO	80 / 90 / 95	4/6	10°/15° 24°/36°
5	FR-T50-7W-00XDTW		120V AC	7.0	710	φ 50 x 50	240	0.9	Yes/Smooth transition	80 / 90 / 95	4/6	60°

*JA8 & TITLE20 PASS

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

T5/S8

SERIES



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



DIMMABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		



1 2 3 4 5

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	V/A(W)	CRI	SDCM
1	FR-T5-3W-024DIM	12V AC/DC	2.9	320	Φ 18 x 44	11	0.9	3.2	80 / 90 / 95	4/6
2	FR-T5-4W-007DIM	12V AC/DC	3.8	420	Φ 18 x 49	14	0.9	4.2	80 / 90 / 95	4/6
3	FR-T5-5W-002DIM	12V AC/DC	4.8	560	Φ 21 x 55	19	0.9	5.3	80 / 90 / 95	4/6
4	FR-T5-5W-013DIM	12V AC/DC	4.2	460	Φ 18 x 52	17	0.9	4.7	80 / 90 / 95	4/6
5	FR-T5-6W-016DIM	12V AC/DC	6.0	750	Φ 19 x 73	22	0.9	6.7	80 / 90 / 95	4/6

*JA8 & TITLE20 PASS



NON-DIMMABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		



5 6

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	V/A(W)	CRI	SDCM
5	FR-S8-2W-001	12V AC/DC	2.0	230	Φ 23 x 54	23	0.7	2.9	80 / 90 / 95	4/6
5	FR-S8-3W-001	12V AC/DC	2.8	350	Φ 23 x 54	23	0.7	4.0	80 / 90 / 95	4/6
6	FR-S8-4W-001	12V AC/DC	3.7	450	Φ 23 x 54	23	0.7	5.4	80 / 90 / 95	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K



NON-DIMMABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		



1 2 3 4 5



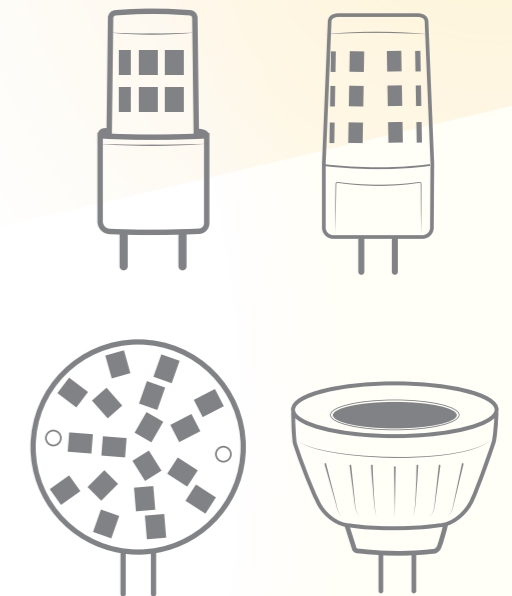
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No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	V/A(W)	CRI	SDCM
1	FR-T5-1.5W-001	12V AC/DC	1.5	180	Φ12 x 36	5	0.7	2.1	80/90/95	4/6
2	FR-T5-2.5W-003	12V AC/DC	2.5	270	Φ17 x 37	8	0.7	3.6	80/90/95	4/6
3	FR-T5-2.5W-003	12V AC/DC	2.5	270	Φ20 x 39	12	0.7	3.6	80/90/95	4/6
4	FR-T5-3W-001	12V AC/DC	2.8	350	Φ18 x 53	15	0.7	4.0	80/90/95	4/6
5	FR-T5-4W-001	12V AC/DC	3.6	430	Φ18 x 53	16	0.7	5.1	80/90/95	4/6
6	FR-T5-5W-001	12V AC/DC	4.6	560	Φ21 x 55	19	0.7	6.6	80/90/95	4/6
7	FR-T5-2.5W-011	12V AC/DC	2.4	250	Φ16 x 43	10	0.7	3.4	80/90/95	4/6
8	FR-T5-3W-018	12V AC/DC	2.8	300	Φ18 x 44	11	0.7	4.0	80/90/95	4/6
9	FR-T5-4.5W-022	12V AC/DC	4.2	400	Φ20 x 54	12	0.7	6.0	80/90/95	4/6
10	FR-T5-1.5W-004	12V AC/DC	1.5	180	17 x 8 x 50	9	0.7	2.1	80/90/95	4/6
11	FR-T5-2.5W-004	12V AC/DC	2.5	270	17 x 8 x 50	10	0.7	3.6	80/90/95	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

G4

GU4 / GY6.35



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



NON-DIMMABLE

Flicker Free | Ceramic+PC | 3 Years Warranty
 CE, EMC, New ErP, ETL, FCC, SAA, PSE
 Suitable for use in damp locations
 Suitable for use in totally enclosed lighting fixture

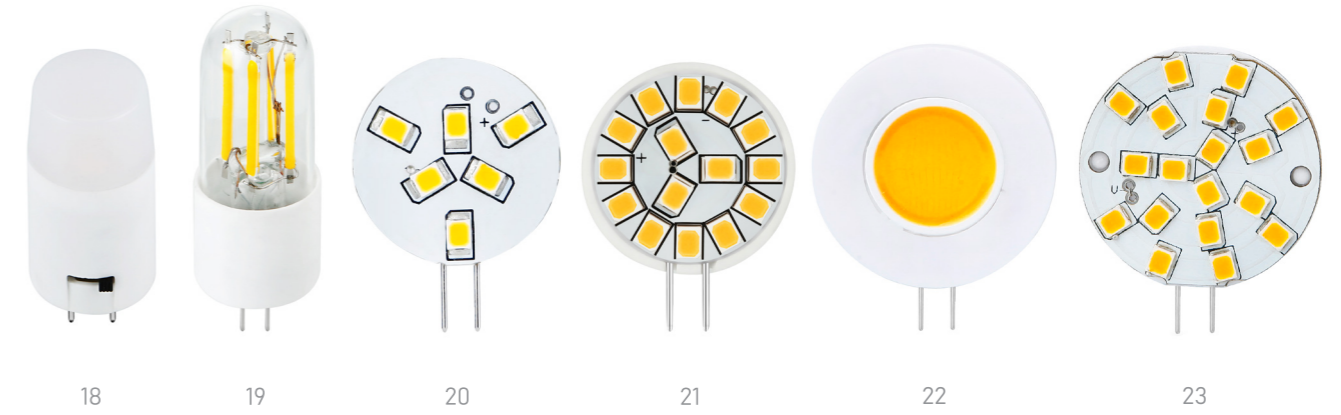


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10 11 12 13 14 15 16 17

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	V/A(W)	CRI	SDCM
1	FR-G4-1W-002	12V AC/DC	1.0	100	φ11 x 34	4	0.7	1.4	80/90/95	4/6
2	FR-G4-1.5W-001	12V AC/DC	1.4	180	φ12 x 37	5	0.7	2.0	80/90/95	4/6
3	FR-G4-2W-002	12V AC/DC	1.9	210	φ15 x 37	6	0.7	2.7	80/90/95	4/6
4	FR-G4-2.5W-003	12V AC/DC	2.4	270	φ16 x 37	7	0.7	3.4	80/90/95	4/6
5	FR-G4-3W-001	12V AC/DC	2.8	350	φ16 x 43	10	0.7	4.0	80/90/95	4/6
6	FR-G4-4W-001	12V AC/DC	3.6	430	φ18 x 46	13	0.7	5.1	80/90/95	4/6
7	FR-G4-5W-001	12V AC/DC	4.6	560	φ21 x 50	16	0.7	6.6	80/90/95	4/6
8	FR-G4-5W-027-IP65	12V AC/DC	4.6	520	φ17 x 46	12	0.7	6.6	80/90/95	4/6
9	FR-G4-5W-028	12V AC/DC	4.6	520	φ18 x 47	15	0.7	6.6	80/90/95	4/6
10	FR-G4-4W-015SW-P	12V AC/DC	3.6	430	φ19 x 45	10	0.7	5.1	80/90/95	4/6
11	FR-G4-4W-016SW-3CCT	12V AC/DC	3.6	400	φ18 x 50	10	0.7	5.1	80/90/95	4/6
12	FR-G4-2W-015SW-RGB	12V AC/DC	1.9	35LM-R / 110LM-G / 32LM-B	φ19 x 45	10	0.7	2.7	80/90/95	4/6
13	FR-G4-3W-037SW-RGBW	12V AC/DC	2.7	310LM-W / 48LM-R / 115LM-G / 28LM-B	φ18 x 50	11	0.7	3.9	80/90/95	4/6
14	FR-G4-1.2W-001	12V AC/DC	0.9	90	φ10 x 33	4	0.7	1.3	80/90/95	4/6
15	FR-G4-2.5W-011	12V AC/DC	2.4	250	φ16 x 38	7	0.7	3.4	80/90/95	4/6
16	FR-G4-3W-018	12V AC/DC	2.8	300	φ18 x 39	8	0.7	4.0	80/90/95	4/6
17	FR-G4-4.5W-022	12V AC/DC	4.2	400	φ20 x 49	14	0.7	6.0	80/90/95	4/6
18	FR-G4-3.5W-029SW-P	12V AC/DC	3.5	360	φ19 x 46	10	0.7	5.0	80/90/95	4/6



18 19 20 21 22 23



24 25 26 27 28 29

No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	V/A(W)	CRI	SDCM
18	FR-G4-3.5W-030SW-3CCT	12V AC/DC	3.2	360	φ19 x 46	10	0.7	4.6	80/90/95	4/6
18	FR-G4-2.3W-002SW-RGB	12V AC/DC	2.2	58LM-R / 130LM-G / 23LM-B	φ19 x 46	10	0.7	3.1	80/90/95	4/6
19	FR-G4-3.5W-033	12V AC/DC	3.5	450	φ19 x 59	10	0.7	5.0	80/90/95	4/6
20	FR-G4-1W-001	12V AC/DC	1.0	90	φ24 x 32 x H8	5	0.7	1.4	80/90/95	4/6
21	FR-G4-2W-003	12V AC/DC	1.8	180	φ24 x 32 x H10	6	0.7	2.6	80/90/95	4/6
22	FR-G4-2W-004	12V AC/DC	1.8	180	φ30 x 38 x H12	11	0.7	2.6	80/90/95	4/6
23	FR-G4-3W-003	12V AC/DC	2.8	300	φ30 x 38 x H9	10	0.7	4.0	80/90/95	4/6
22	FR-G4-3W-004	12V AC/DC	2.8	280	φ30 x 38 x H12	11	0.7	4.0	80/90/95	4/6
24	FR-G4-3W-010	12V AC/DC	2.6	260	φ30 x 38 x H12	10	0.7	3.7	80/90/95	4/6
25	FR-G4-2W-005	12V AC/DC	1.8	180	φ30 x 27	13	0.7	2.6	80/90/95	4/6
25	FR-G4-3W-005	12V AC/DC	2.8	280	φ30 x 27	13	0.7	4.0	80/90/95	4/6
26	FR-G4-3W-012	12V AC/DC	2.6	260	φ30 x 27	13	0.7	3.7	80/90/95	4/6
27	FR-G4-3W-036-IP65	12V AC/DC	2.8	350	φ48 x 15 x 11	9	0.7	4.0	80/90/95	4/6
28	FR-G4-2W-009	12V AC/DC	2.0	150	φ16 x 29	7	0.7	2.9	80/90/95	4/6
29	FR-G4-3W-006	12V AC/DC	2.6	260	φ17 x 40	10	0.7	3.7	80/90/95	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K



Flicker Free | Ceramic+PC | 3 Years Warranty
 CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE
 Suitable for use in damp locations
 Suitable for use in totally enclosed lighting fixture



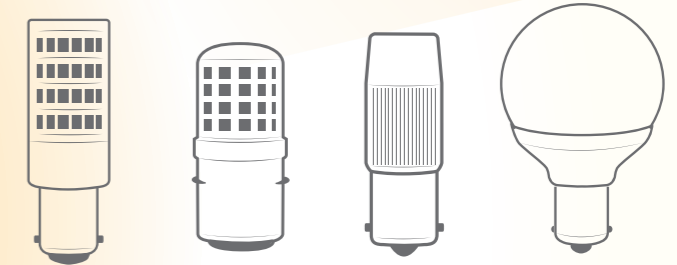
No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	V/A(W)	CCT(K) Changeable	CRI	SDCM
1	FR-G4-3W-024DIM	12V AC/DC	2.9	320	φ18 X 39	10	0.9	3.2	NO	80 / 90 / 95	4/6
2	FR-G4-4W-007DIM	12V AC/DC	3.8	420	φ18 X 44	13	0.9	4.2	NO	80 / 90 / 95	4/6
3	FR-G4-5W-002DIM	12V AC/DC	4.8	560	φ21 X 50	16	0.9	5.3	NO	80 / 90 / 95	4/6
4	FR-G4-5W-013DIM	12V AC/DC	4.2	460	φ18 X 47	15	0.9	4.7	NO	80 / 90 / 95	4/6
5	FR-G4-6W-016DIM	12V AC/DC	6.0	750	φ19 X 68	21	0.9	6.7	NO	80 / 90 / 95	4/6
6	FR-G4-3.5W-035DIM	12V AC/DC	3.5	340	φ18 X 44	12	0.9	3.9	NO	80 / 90 / 95	4/6
7	FR-G4-4.5W-028DIM	12V AC/DC	4.1	420	φ20 X 49	15	0.9	4.6	NO	80 / 90 / 95	4/6
8	FR-G4-3W-024DTW	12V AC/DC	2.9	300	φ18 X 39	10	0.9	3.2	Yes/Smooth transition	80 / 90 / 95	4/6
9	FR-G4-4W-007DTW	12V AC/DC	3.8	420	φ18 X 44	13	0.9	4.2	Yes/Smooth transition	80 / 90 / 95	4/6
10	FR-G4-5W-013DTW	12V AC/DC	4.2	450	φ18 X 47	15	0.9	4.7	Yes/Smooth transition	80 / 90 / 95	4/6
6	FR-G4-3.5W-035DTW	12V AC/DC	3.5	320	φ18 X 44	12	0.9	3.9	Yes/Smooth transition	80 / 90 / 95	4/6
7	FR-G4-4.5W-028DTW	12V AC/DC	4.1	400	φ20 X 49	15	0.9	4.6	Yes/Smooth transition	80 / 90 / 95	4/6
11	FR-G4-3.5W-029SW-P	12V AC/DC	2.8	330	φ18 X 50	11	0.9	3.9	NO	80 / 90 / 95	4/6

*JA8 & TITL20 PASS

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

BA15s

SERIES



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



DIMMABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		



No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	V/A(W)	CRI	SDCM
1	FR-BA15-3W-024DIM	12V AC/DC	2.9	320	φ18 x 49	13	0.9	3.2	80/90/95	4/6
2	FR-BA15-4W-007DIM	12V AC/DC	3.8	420	φ18 x 54	17	0.9	4.2	80/90/95	4/6
3	FR-BA15-5W-002DIM	12V AC/DC	4.8	560	φ21 x 62	20	0.9	5.3	80/90/95	4/6
4	FR-BA15-5W-013DIM	12V AC/DC	4.2	460	φ18 x 59	18	0.9	4.7	80/90/95	4/6
5	FR-BA15-6W-016DIM	12V AC/DC	6.0	750	φ19 x 80	25	0.9	6.7	80/90/95	4/6
6	FR-ALR37-BA15-3W-027DIM	12V AC/DC	3.0	270	φ37 x 36	20	0.9	3.3	80/90/95	4/6
7	FR-ALR56-BA15-6W-017DIM	12V AC/DC	6.0	600	φ56 x 54	86	0.9	6.7	80/90/95	4/6

*JA8 & TITL20 PASS

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K



NON-DIMMABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		

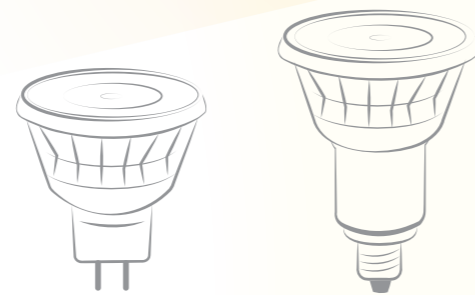


No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	V/A(W)	CRI	SDCM
1	FR-BA15-2.5W-003	12V AC/DC	2.5	270	φ17 x 44	12	0.7	3.6	80/90/95	4/6
2	FR-BA15-2.5W-004	12V AC/DC	2.5	270	φ20 x 40	11	0.7	3.6	80/90/95	4/6
3	FR-BA15-3W-001	12V AC/DC	2.8	350	φ18 x 52	15	0.7	4.0	80/90/95	4/6
4	FR-BA15-4W-001	12V AC/DC	3.6	430	φ17 x 55	17	0.7	5.1	80/90/95	4/6
5	FR-BA15-5W-001	12V AC/DC	4.6	560	φ21 x 62	23	0.7	6.6	80/90/95	4/6
6	FR-BA15-5W-028	12V AC/DC	4.6	520	φ18 x 59	21	0.7	6.6	80/90/95	4/6
7	FR-BA15-2.5W-011	12V AC/DC	2.4	250	φ16 x 49	11	0.7	3.4	80/90/95	4/6
7	FR-BA15-3W-018	12V AC/DC	2.8	300	φ18 x 52	14	0.7	4.0	80/90/95	4/6
8	FR-BA15-4.5W-022	12V AC/DC	4.2	400	φ20 x 55	16	0.7	6.0	80/90/95	4/6
9	FR-BA15-3W-013-G45	12V AC/DC	2.8	300	φ45 x 70	31	0.7	4.0	80/90/95	4/6
10	FR-BA15-3W-017	12V AC/DC	2.8	300	φ38 x 56	33	0.7	4.0	80/90/95	4/6
11	FR-BA15-2.5W-017	12V AC/DC	2.5	350	φ37 x 36	26	0.7	3.6	80/90/95	4/6
11	FR-BA15-3W-030	12V AC/DC	3.0	250	φ37 x 36	20	0.7	4.3	80/90/95	4/6
12	FR-BA15-3W-030	12V AC/DC	3.0	220	φ37 x 36	18	0.7	4.3	80/90/95	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

MR16

MR8/MR11/EZ10



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



DIMMABLE



CCT-
CHANGEABLE

Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, JA8, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		



1



2



3



4



5

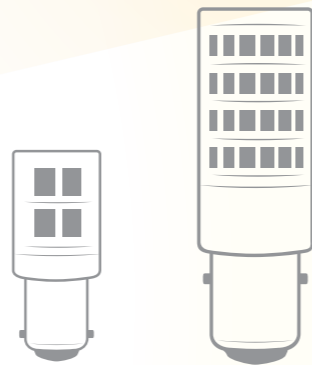
No.	ITEM N/O	Base	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	V/A (W)	CCT(K) Changeable	CRI	SDCM	DEGREE
1	FR-MR8-GU4-2.5W-021DIM	MR8	12V AC/DC	2.5	250	φ25 X 38	17	0.9	2.8	NO	80 / 90 / 95	4/6	36° /50°
2	FR-MR11-GU4-3W-026DIM	MR11	12V AC/DC	3.3	320	φ35 X 41	24	0.9	3.7	NO	80 / 90 / 95	4/6	24° /36° /60°
3	FR-MR16-GU5.3-3W-033DIM	MR16	12V AC/DC	3.0	320	φ50 X 47	58	0.9	3.3	NO	80 / 90 / 95	4/6	10° /15° /24° /36° /60° /120°
3	FR-MR16-GU5.3-5W-015DIM	MR16	12V AC/DC	5.3	520	φ50 X 47	58	0.9	5.9	NO	80 / 90 / 95	4/6	
3	FR-MR16-GU5.3-7W-005DIM	MR16	12V AC/DC	6.7	700	φ50 X 47	58	0.9	7.4	NO	80 / 90 / 95	4/6	
3	FR-MR16-GU5.3-8W-008DIM	MR16	12V AC/DC	7.5	890	φ50 X 47	58	0.9	8.3	NO	80 / 90 / 95	4/6	
3	FR-MR16-GU5.3-7W-005DTW	MR16	12V AC/DC	6.7	700	φ50 X 47	58	0.9	7.4	Yes/Smooth transition	80 / 90 / 95	4/6	
4	FR-MR16-GU5.3-7W-016SWD-3CCT	MR16	12V AC/DC	6.5	680	φ50 X 47	58	0.9	7.2	Yes / 3-Step CCT Selector on Lamp	80 / 90 / 95	4/6	10° /15° /24° /36° /60° /120°
4	FR-MR16-GU5.3-3.5W-037SWD-RGB	MR16	12V AC/DC	3.3	80-R 200-G 35-B	φ50 X 47	58	0.9	3.7	Yes / 3-Step CCT Selector on Lamp	80 / 90 / 95	4/6	
4	FR-MR16-GU5.3-3.5W-039SWD-RGBY	MR16	12V AC/DC	3.5	100-R 200-G 70-B 330-Y	φ50 X 47	58	0.9	3.9	Yes / 4-Step CCT Selector on Lamp	80 / 90 / 95	4/6	
5	FR-EZ10-3W-026DIM	EZ10	12V AC/DC	3.1	320	φ50 X 60	73	0.9	3.4	NO	80 / 90 / 95	4/6	10° /15° /24° /36° /60° /120°
5	FR-EZ10-5W-015DIM	EZ10	12V AC/DC	5.2	520	φ50 X 60	73	0.9	5.8	NO	80 / 90 / 95	4/6	
5	FR-EZ10-7W-005DIM	EZ10	12V AC/DC	6.7	700	φ50 X 60	73	0.9	7.4	NO	80 / 90 / 95	4/6	
5	FR-EZ10-7W-005DTW	EZ10	12V AC/DC	6.7	700	φ50 X 60	73	0.9	7.4	Yes/Smooth transition	80 / 90 / 95	4/6	

*JA8 & TITLE20 PASS

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

BA20 BA9s

SERIES



- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
- SUITABLE FOR USE IN TOTALLY ENCLOSED LIGHTING FIXTURE



Flicker Free	Ceramic+PC	3 Years Warranty
CE, EMC, New ErP, ETL, FCC, SAA, PSE		
Suitable for use in damp locations		
Suitable for use in totally enclosed lighting fixture		



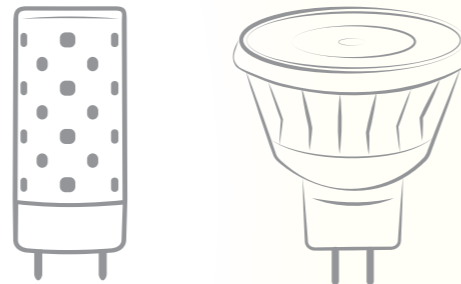
No.	ITEM N/O	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	V/A(W)	CRI	SDCM
1	FR-BA9S-1.5W-001	12V AC/DC	1.4	140	Φ12 X 33	5	0.7	2.0	80 / 90 / 95	4/6
2	FR-BA9S-1.5W-008	24V DC	1.1	62	Φ19 X 30	6	1.0	1.1	80 / 90 / 95	4/6
3	FR-BA20-4W-001	12V AC/DC	3.7	420	Φ22 X 58	23	0.7	5.3	80 / 90 / 95	4/6
4	FR-BA20-5W-001	12V AC/DC	4.6	560	Φ22 X 66	26	0.7	6.6	80 / 90 / 95	4/6

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K

PLC bulbs

SERIES

- 100% QUALITY CONTROL
- 100% AGING TEST BEFORE PACKING
- SUITABLE FOR USE IN DAMP LOCATIONS
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Flicker Free | Ceramic+PC | 3 Years Warranty
 CE, EMC, New ErP, ETL, FCC, SAA, PSE
 Suitable for use in damp locations
 Suitable for use in totally enclosed lighting fixture



PLCREMOTE



QE-PLG-120W-002

No.	ITEM N/O	Base	Voltage (V)	Watt (W)	Lumen (lm)	Dimensions (mm)	Weight (g)	PF	CCT(K) Changeable	V/A (W)	Degree
1	FR-G4-2.5W-018PL	G4	PLC OUTPUT 12V	2.1	135-2100K 165-5700K 30-R 50-G 50-B	φ18 X 45	10	0.7	YES / RGBCW	3.0	/
2	FR-G4-2.5W-019PL	G4	PLC OUTPUT 12V	2.0	120-2100K 130-5700K 25-R 45-G 50-B	φ20 X 47	14	0.7		2.8	/
3	FR-MR11-GU4-2.5W-020PL	MR11	PLC OUTPUT 12V	2.0	100-2100K 150-5700K 34-R 50-G 12-B	φ35 X 41	28	0.7		2.8	24°/36° 60°
4	FR-MR16-GU5.3-6W-020PL	MR16	PLC OUTPUT 12V	5.8	360-2100K 600-5700K 70-R 130-G 40-B	φ50 X 47	55	0.7		8.3	10°/15° 24°/36° 60°/120°

THE LUMEN VALUES ARE BASED ON STABLE DATA @ 3000K, CRI80
 CCT OPTIONS: 2200K, 3000K, 3500K, 4000K, 5000K, 5700K, 6000K OR 6500K