

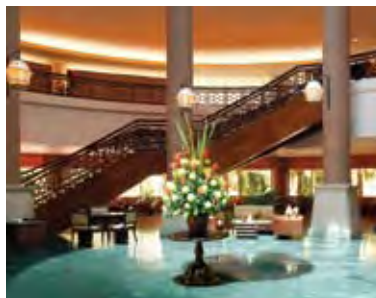
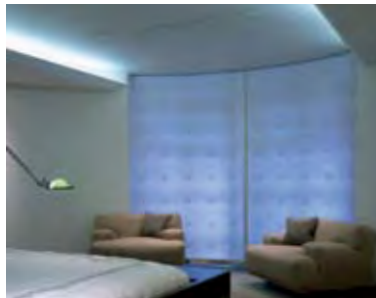
LED – a revolution in lighting.  
Light Emitting Diodes (LEDs) were invented by GE scientists in the 1960s and are vastly different from traditional light sources.

At GE, we have an outstanding track record in designing and building award winning LED solutions. Our world-class engineers combine the best available components with innovative optical, electrical and thermal designs to create LED lamps and systems that are optimized for superior performance. We are superbly positioned to continue as an industry-leading innovator for years to come.

**The benefits of using LEDs can include:**

- Up to 90 percent energy-cost savings
- A long useful life of up to 50,000 hours
- Minimized maintenance and related costs
- Excellent low temperature performance
- No mercury or lead
- Extremely low UV (ultraviolet) and IR (infrared)

Combining GE's innovative LED lamps and systems with creative lighting design can lay the foundation for a new generation of cutting edge, energy efficient lighting schemes.



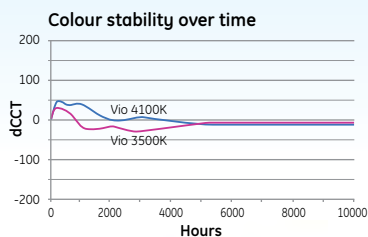
# Advanced lighting technologies

## Best Quality and Most Stable Light

Vio  
High power white LED  
The look that lasts



- Unique combination of Violet LEDs and multi-phosphors
- 50,000 hours of exceptionally high quality light
- Less than 75K colour shift over life
- 1.2, 3.6 and 7.2W versions offering up to 350 typical lumens



## Innovative Designs

GE LED Display Case  
Innovative optics combine  
ambience with sparkle



- Innovative optics, putting light exactly where its needed
- Excellent thermal management combined with aesthetic designs
- Ease of use features
- Complete systems approach with controls and accessories



Best in Class Award

## Outstanding Reliability

GE LED Cove  
Up to 50,000 hours  
of Cove lighting



- GE LED Products are tested in one of the worlds leading reliability laboratories
- Rigorous test protocols used at system and device level
- 10 years experience in LED systems in harsh outdoor applications
- Exceptionally low warranty return rates



Special Recognition


Next Generation Luminaires competition recognizing design excellence of LED luminaires.




## Advanced lighting technologies – Retrofit upgrades

**For Energy Saving**


Halogen GU10



upgrade to



GE LED 4W GU10




### GE LED 4W GU10


- Same candela & beam angle as 20W halogen – 80% energy saving
- Equivalent size to halogen GU10 lamps
- 7.5 times rated life, to 70% lumen maintenance
- Warm white 3100K
- Excellent colour rendering 80+

**For Energy Saving**


Incandescent R50



upgrade to



GE LED 4W R50




### GE LED 4W R50


- Same candela and beam angle as 40W incandescent – 90% energy saving
- Equivalent size to incandescent R50 lamps
- 15 times rated life, to 70% lumen maintenance
- Warm white 3100K
- Excellent colour rendering 80+

**For Energy Saving**


Incandescent R63



upgrade to



GE LED 7W R63 WFL




### GE LED 7W R63 WFL


- Similar candela to 60W R63 incandescent lamps (36° version)
- Similar beam angle to incandescent R63 lamps (36° version)
- Consumes almost 90% less energy than 60W incandescent R63
- Long life - 20,000 hours to 70% lumen output
- Same size as incandescent R63 lamps
- Uses industry standard E27 base
- Warm white 2700K and 3000K
- Excellent colour rendering 80+

**For Energy Saving**


Halogen PAR20



upgrade to



GE LED 7W R63 FL



### GE LED 7W R63 FL

- 20% more candela than 50W halogen – 87% energy saving
- Similar output to 20W electronic halogen PAR20 – 67% energy saving
- 10 times rated life of standard halogen, and 4 times rated life of electronic halogen, to 70% lumen maintenance
- Warm white 3000K
- Excellent colour rendering 80+

# Vio High Power White LED

## The look that lasts™

*"A major advance in colour stability"*  
Lighting Design Awards Judges Panel

### The Vio LED story

By combining highly efficient 405 nm violet chips with proprietary phosphors, Vio LEDs enable tremendous flexibility in colour temperature and CRI. The result is a very stable, warm white colour, with minimal part-to-part colour variation. Plus, it is diffused, for a pleasing, more uniform light similar to a soft white incandescent lamp. Vio LEDs produce white light that meets the high standards of lighting designers.

### Colour stability over life

Since the colour change is less than 75 Kelvin over 50,000 hours, Vio LEDs can be used with confidence in general illumination applications as a replacement for traditional light sources. Not only will Vio LEDs create the mood a lighting designer is looking for, it will maintain the mood over time.

### High flux package in warm white colours

Our integrated chip technology produces high light output in a single package. This reduces design complexity for lighting manufacturers, while still providing a "quality of light" solution.



### Application areas

- **General:** pendant, sconce
- **Commercial:** task, display
- **Landscape:** pathway, in-ground
- **Architectural:** wall wash, marker



## GE LED Display Case Lighting System

### Better light Better opportunities



#### The ultimate energy saving display case solution

To save energy without compromising appearance it is vital that more lux per watt is delivered inside the case versus other systems. With GE's LED Display Case System, every emitted ray of light is directed within a 90° field, ensuring all light is usable and contained inside the case.

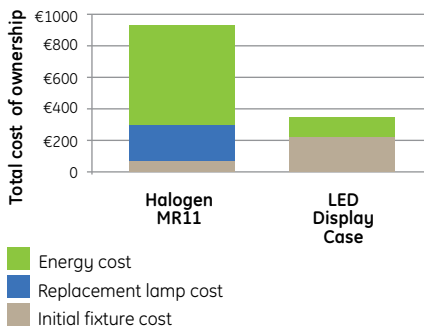
#### How LED can save money and help the environment

In this example, a single 25.9W LED Display Case unit is used instead of 6 halogen 20W MR11 lamps in a new jewellery display case. The benefits are clear:

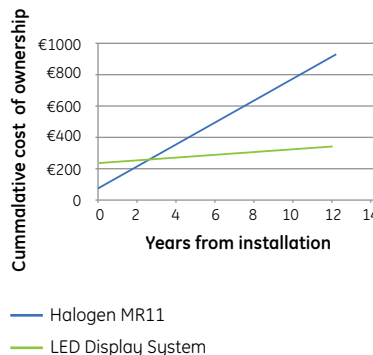
- 81% saving in energy consumption and CO<sub>2</sub> emissions
- 12 year life of the LED system eliminates lamp replacement costs
- 64% reduction in total cost of ownership over LED useful lifetime
- 2.4 year payback



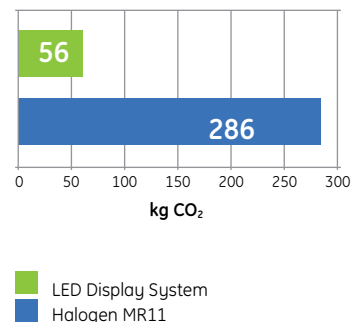
#### Cost of ownership over useful life of LED system



#### Payback



#### CO<sub>2</sub> emitted per case per year



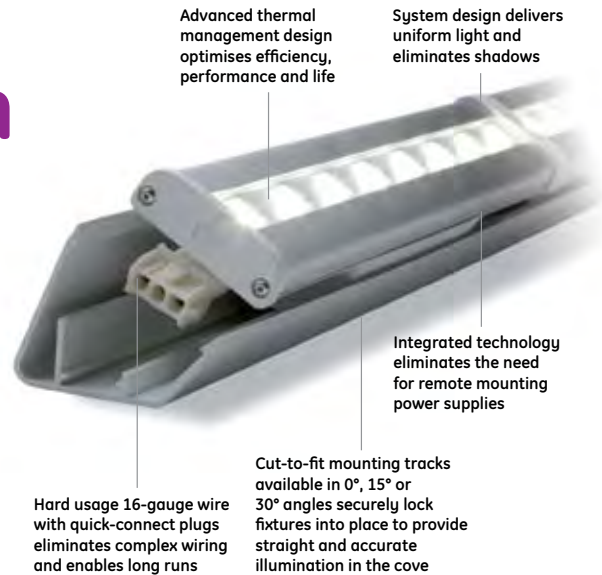
**Assumptions** Energy cost of €0.10 per kWh, 0.536 kg CO<sub>2</sub> emitted per kWh (European average from Eco-Invent). 4000 operational hours per year. Halogen fixture cost of €10, lamp cost of €3. NOTE theoretical 'typical' example only. All applications will vary.

# LED Cove Lighting System

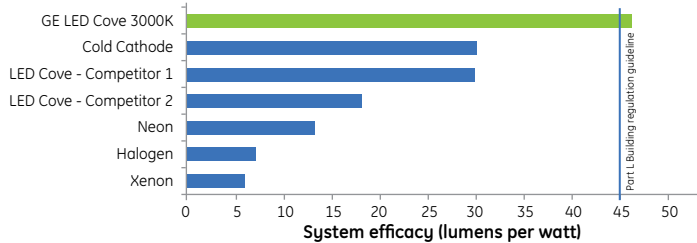
## Energy efficient light that lasts

GE believes that environmental responsibility and beautiful interior design can exist simultaneously. That's why we have designed this new best in class LED Cove lighting system.

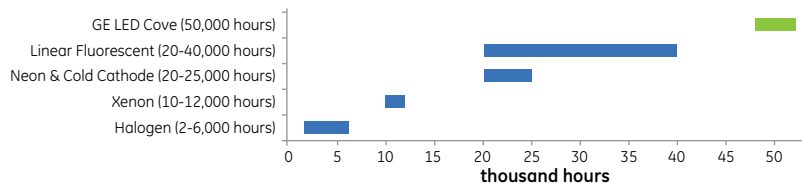
LED Cove delivers quality white light at outstanding efficiency – up to 49 lumens per watt – which is up to 50% greater than competitive LED systems at similar colour temperatures. Its integral electronics allow the system to be powered directly from line voltage, and mean that the system efficiency can meet today's demanding building regulation standards.



Efficiency comparison (warm white)



Useful lifetime comparison



# LED Solutions

## Vio



### Vio 1 Chip

Wattage: 1.2W  
Colour Temperature:  
3000, 3500,  
4100K  
Life: 50,000Hrs  
Page: 16



### Vio 3 Chip

Wattage: 3.6W  
Colour Temperature:  
3000, 3500,  
4100K  
Life: 50,000Hrs  
Page: 16



### Vio 6 Chip

Wattage: 7.2W  
Colour Temperature:  
3000, 3500,  
4100K  
Life: 50,000Hrs  
Page: 16

## LED Display Case



Range of length: 564, 716, 869, 1021,  
1173, 1326, 1478, 1783mm  
Range of watts: 17.3, 21.6, 25.9, 30.2,  
34.6, 38.9, 43.2, 51.8W  
Colour Temperature: 3500, 4200K  
Accessories and power  
supply available  
Page: 16-17

## LED Cove



Length: 325mm  
Wattage: 6.5W  
Colour Temperature: 2700, 3000, 4100K  
Accessories available  
Page: 17

# Selector

## MR16 Mains Voltage



### Décor

Cap: GU10  
Wattages: 1W  
Voltages: 220-240V  
Beam Spread: 20°  
Life: 12,000Hrs  
Page: 15



### High Output

Cap: GU10  
Wattages: 4W  
Voltages: 230, 240V  
Beam Spread: 36°  
Life: 15,000Hrs  
Page: 15

## PAR16 & R50 Mains Voltage



### Décor PAR16

Cap: E14  
Wattages: 1W  
Voltages: 220-240V  
Beam Spread: 20°  
Life: 12,000Hrs  
Page: 15



### High Output R50

Cap: E14  
Wattages: 4W  
Voltages: 230, 240V  
Beam Spread: 36°  
Life: 15,000Hrs  
Page: 15

## MR16 Low Voltage



### Décor

Cap: GU5.3  
Wattages: 1W  
Voltages: 12V  
Beam Spread: 20°  
Life: 12,000Hrs  
Page: 15

## R63 Mains Voltage



### High Output

Cap: E27, B22  
Wattages: 7W  
Voltages: 220-240V  
Beam Spread: 20, 36°  
Life: 20,000Hrs  
Page: 15



## Product identification

The following glossary of terms will help you when selecting lamps in this section. Within each product line, lamps are divided into families – within these families, lamps are listed by wattage. The Product Description can be used as a quick reference to each product's attributes. Where Life or Average Life are stated we refer to the industry standard definition of how many hours of operation 50% of a given installation will exceed.

### Watts:

Energy Used - Nominal Watts. To estimate energy consumption (kWh), multiply watts x hours of use and divide by 1000

### Cap:

The type of cap fitted. See page 134-135 for cap drawings

### Volts:

Lamp data is based on operation at rated voltage

### Candela:

Luminous intensity of the lamp beam expressed in candelas

### Additional parameters:

**Forward Voltage (Vf) Typical (V):** Typical voltage drop across the LED when driven at 350mA. Value will vary at different drive currents.

**Track Angle:** LED Cove is available with 3 mounting options, at 0, 15 and 30 degrees to the horizontal surface.

**Life (L70, h):** LED lamp and system life is expressed as L70 - the point in time when light output has fallen to 70% of its initial value

**CCT (K):** Colour Temperature - Kelvins  
A measure of the visual "warmth" or "coolness" of the light from the lamp. The higher the value the whiter or "cooler" the light appears.

**Length:** Lamp length in mm

Wattage (W)

Volts (V)

Cap

**Product description:**  
The lamp's identification code

Product Description

Product Code

Candela (cd)

Beam Angle (°)

CCT (K)

CRI (Ra)

Life (L70, h)

Diameter (mm)

Length (mm)

Pack Qty

### LED High Output Range - R63

7	220-240	E27	LED7/R63/827/220-240V/FL/E27	76093	1200	20	2700	80+	20,000	63	101	8
7	220-240	E27	LED7/R63/827/220-240V/WFL/E27	76094	520	36	2700	80+	20,000	63	101	8
7	220-240	B22	LED7/R63/827/220-240V/FL/B22	76099	1200	20	2700	80+	20,000	63	101	8

LED 7 / R63 / 8 30 / 220-240V / FL / E27

**(LED)**  
Identifies lamp as LED lamp

**(7)**  
Identifies Lamp's wattage

**(R63)**  
Identifies the lamp family

**(8) Colour rendering**  
6 - Ra 58 to 67 (Group 2B)  
7 - Ra 68 to 77 (Group 2A)  
8 - Ra 78 to 87 (Group 1B)  
9 - Ra 88 to 97 (Group 1A)

**(30) Colour temperature**  
XX = First 2 digits of temperature in Kelvin - XX00K  
Example: 30 is 3000K

**(230V) Volts:**  
Lamp data is based on operation at rated voltage

**(FL)**  
Identifies as Floodlight

**(E27)**  
Identifies the cap type

### Beam Angle:

The angle of the cone of light produced by a reflector lamp at 50% of its peak intensity

### Diameter:

Bulb diameter in mm

### Product code:

It is important to use this code when ordering to ensure that you receive the exact product you require

### CRI (Ra):

Colour Rendering Index  
An indication of the ability of the lamp to render object colours in a normal, natural way. The higher the number (0-100), the better the colour appearance.

### Pack quantity:

Number of product units packed in a case.

Wattage [W]	Volts [V]	Cap	Product Description	Product Code	Candela [cd]	Beam Angle [°]	CCT [K]	CRI [Ra]	Life [L70, h]	Diameter [mm]	Length [mm]	Pack Qty
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### LED High Output Range - GU10

4	230	GU10	LED4/GU10/830/230V/WFL	75280	225	36	3100	80+	15,000	50	57	8
4	240	GU10	LED4/GU10/830/240V/WFL	75281	225	36	3100	80+	15,000	50	57	8



### LED High Output Range - R50

4	230	E14	LED4/R50/830/230V/WFL/E14	75288	225	36	3100	80+	15,000	50	76	8
4	240	E14	LED4/R50/830/240V/WFL/E14	75289	225	36	3100	80+	15,000	50	76	8



### LED High Output Range - R63

7	220-240	E27	LED7/R63/827/220-240V/FL/E27	76093	1200	20	2700	80+	20,000	63	101	8
7	220-240	E27	LED7/R63/827/220-240V/WFL/E27	76094	520	36	2700	80+	20,000	63	101	8
7	220-240	B22	LED7/R63/827/220-240V/FL/B22	76099	1200	20	2700	80+	20,000	63	101	8
7	220-240	B22	LED7/R63/827/220-240V/WFL/B22	76100	520	36	2700	80+	20,000	63	101	8
7	220-240	E27	LED7/R63/830/220-240V/FL/E27	75294	1200	20	3000	80+	20,000	63	101	8
7	220-240	E27	LED7/R63/830/220-240V/WFL/E27	75296	520	36	3000	80+	20,000	63	101	8
7	220-240	B22	LED7/R63/830/220-240V/FL/B22	75295	1200	20	3000	80+	20,000	63	101	8
7	220-240	B22	LED7/R63/830/220-240V/WFL/B22	75297	520	36	3000	80+	20,000	63	101	8



Colour	Wattage [W]	Volts [V]	Cap	Product Description	Product Code	Candela [cd]	Beam Angle [°]	CCT [K]	CRI [Ra]	Life [L70, h]	Diameter [mm]	Length [mm]	Pack Qty
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### LED Décor Range - GU10

White	1	220-240	GU10	LED/GU10 1W 220-240V	96736	80	20	5000	70+	12,000	50	57	10
Red	1	220-240	GU10	LED GU10 1W 220-240V	96737	80	17	N/A	N/A	12,000	50	57	10
Blue	1	220-240	GU10	LED GU10 1W 220-240V	96738	40	17	N/A	N/A	12,000	50	57	10



Wattage [W]	Volts [V]	Cap	Product Description	Product Code	Candela [cd]	Beam Angle [°]	CCT [K]	CRI [Ra]	Life [L70, h]	Diameter [mm]	Length [mm]	Pack Qty
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### LED Décor Range - MR16

1	12	GU5.3	LED MR16 GU5.3 1W 12V	96739	80	20	5000	70+	12,000	50	50.5	10
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### LED Décor Range - PAR16

1	220-240	E14	LED PAR16 E14 1W 220-240V	96740	80	20	5000	70+	12,000	50	76	10
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# LED Solutions



Wattage (W)	Forward Voltage (Vf) Typical (V)	Product Description	Product Code	Lumen (lm)	CCT (K)	CRI (Ra)	Life (L70, h)	Dimensions	Pack Qty
<b>VIO</b>									
1.2	3.5	VIO/1.2W/730	73357	64	3000	70	50,000	25.40x25.40	10
1.2	3.5	VIO/1.2W/735	73355	67	3500	70	50,000	25.40x25.40	10
1.2	3.5	VIO/1.2W/741	73353	69	4100	70	50,000	25.40x25.40	10
1.2	3.5	VIO/1.2W/830	73351	55	3000	85	50,000	25.40x25.40	10
1.2	3.5	VIO/1.2W/835	73349	55	3500	85	50,000	25.40x25.40	10
1.2	3.5	VIO/1.2W/841	73347	57	4100	85	50,000	25.40x25.40	10
3.6	10.2	VIO/3.6W/730	73356	171	3000	70	50,000	25.40x25.40	10
3.6	10.2	VIO/3.6W/735	73354	188	3500	70	50,000	25.40x25.40	10
3.6	10.2	VIO/3.6W/741	73352	196	4100	70	50,000	25.40x25.40	10
3.6	10.2	VIO/3.6W/830	73350	142	3000	85	50,000	25.40x25.40	10
3.6	10.2	VIO/3.6W/835	73348	153	3500	85	50,000	25.40x25.40	10
3.6	10.2	VIO/3.6W/841	73346	160	4100	85	50,000	25.40x25.40	10
7.2	20.0	VIO/7.2W/730	74759	300	3000	70	50,000	25.40x25.40	10
7.2	20.0	VIO/7.2W/735	74760	350	3500	70	50,000	25.40x25.40	10
7.2	20.0	VIO/7.2W/741	74761	330	4100	70	50,000	25.40x25.40	10
7.2	20.0	VIO/7.2W/830	74762	250	3000	85	50,000	25.40x25.40	10
7.2	20.0	VIO/7.2W/835	74763	275	3500	85	50,000	25.40x25.40	10
7.2	20.0	VIO/7.2W/841	74764	285	4100	85	50,000	25.40x25.40	10

All data quoted at 350mA drive current, Tb = 25° C

Product Description	Product Code	Length (mm)	Pack Qty
OT VIO/CON	73738	610	10

## VIO Molex connector harness

System Wattage* (W)	Illuminance (Ave, Lux)**	Product Description	Product Code	CCT (K) ***	Life (L70, h)	Length (mm)	Width (mm)	Depth (mm)	Pack Qty
17.3	1500	LB24/35K	74217	3500	50,000	564	33	25	1
21.6	1500	LB30/35K	74218	3500	50,000	716	33	25	1
25.9	1500	LB36/35K	74219	3500	50,000	869	33	25	1
30.2	1500	LB42/35K	74220	3500	50,000	1021	33	25	1
34.6	1500	LB48/35K	74221	3500	50,000	1173	33	25	1
38.9	1500	LB54/35K	74222	3500	50,000	1326	33	25	1
43.2	1500	LB60/35K	74223	3500	50,000	1478	33	25	1
51.8	1500	LB72/35K	74224	3500	50,000	1783	33	25	1
17.3	1500	LB24/42K	74225	4200	50,000	564	33	25	1
21.6	1500	LB30/42K	74226	4200	50,000	716	33	25	1
25.9	1500	LB36/42K	74227	4200	50,000	869	33	25	1
30.2	1500	LB42/42K	74228	4200	50,000	1021	33	25	1
34.6	1500	LB48/42K	74229	4200	50,000	1173	33	25	1
38.9	1500	LB54/42K	74230	4200	50,000	1326	33	25	1
43.2	1500	LB60/42K	74231	4200	50,000	1478	33	25	1
51.8	1500	LB72/42K	74232	4200	50,000	1783	33	25	1

## Display Case Lighting System - LED lights



17.3	1500	LB24/35K	74217	3500	50,000	564	33	25	1
21.6	1500	LB30/35K	74218	3500	50,000	716	33	25	1
25.9	1500	LB36/35K	74219	3500	50,000	869	33	25	1
30.2	1500	LB42/35K	74220	3500	50,000	1021	33	25	1
34.6	1500	LB48/35K	74221	3500	50,000	1173	33	25	1
38.9	1500	LB54/35K	74222	3500	50,000	1326	33	25	1
43.2	1500	LB60/35K	74223	3500	50,000	1478	33	25	1
51.8	1500	LB72/35K	74224	3500	50,000	1783	33	25	1
17.3	1500	LB24/42K	74225	4200	50,000	564	33	25	1
21.6	1500	LB30/42K	74226	4200	50,000	716	33	25	1
25.9	1500	LB36/42K	74227	4200	50,000	869	33	25	1
30.2	1500	LB42/42K	74228	4200	50,000	1021	33	25	1
34.6	1500	LB48/42K	74229	4200	50,000	1173	33	25	1
38.9	1500	LB54/42K	74230	4200	50,000	1326	33	25	1
43.2	1500	LB60/42K	74231	4200	50,000	1478	33	25	1
51.8	1500	LB72/42K	74232	4200	50,000	1783	33	25	1

\* Typical system power consumption including driver losses, when driven by recommended GE power supply - product code 74601

\*\* Average lux on horizontal surface in 51x152 cm glass case with mirror back at 30 cm vertically from light source and with light source mounted 2.5 cm from front edge

\*\*\* Colour temperature (CCT) +/-5%



Product Description	Product Code	Item	Dimensions (Height x Width x Depth) (mm)	Pack Qty
<b>Display Case Lighting System - Accessories</b>				
LB-WIRE-END (BEAUTY COVER)	74241	Finishing Cover	25x33x3	20
LB-CLIP	74243	Mount Clip (Standalone)	34x34x16	20
LB-EXT-CLIP	74244	Mount Clip (Integrated)	44x33x51	20
LB-TUBE-MOUNT	74245	Drop Tube Mount	69x23x31	20



Power Supply Specification (Product Code 74601)	Min	Typical	Max
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### Display Case Lighting System - Power Supply

Input Voltage (VAC)	90	220-240	264
Input Frequency (Hz)		50/60	
Input Current (A)			0.85
Output Voltage (VDC)	11.7		12.3
Output Current (ADC)			5
Output Power (W)			60
Ambient Operating Temperature (°C)	-40	25	60
Ambient Humidity	0%		95%
Ambient Storage Temperature (°C)	-40		85
Case Operating Temperature (°C)			90
Enclosure Specification	Damp location rated		
Remote Mounting Distance (m)			0.9



Wattage (W)	Volts (V)	Product Description	Product Code	Lumen (lm)	CCT (K)	CRI (Ra)	Life (L70, h)	Length (mm)	Pack Qty
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### Cove Lighting System - Fixture

6.5	220-240	LC12/727/240V	73100	290	2700	70	50,000	325.0	10
6.5	220-240	LC12/730/240V	73101	300	3000	70	50,000	325.0	10
6.5	220-240	LC12/741/240V	73826	320	4100	77	50,000	325.0	10



Product Description	Product Code	Track Angle [°]	Length (mm)	Pack Qty
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### Cove Lighting System - Mounting track

LC-MT48/0	73105	0	1219	25
LC-MT48/15	73106	15	1219	25
LC-MT48/30	73107	30	1219	25



Product Description	Product Code	Length (mm)	Pack Qty
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### Cove Lighting System - Jumper Cable (JC) & Leader Cable (LC)

LC-JC/1m/CE	73616	1000	1
LC-LC/12m/CE	73617	12000	1
LC-LC/3m/CE	73618	3000	1

