



PHILIPS

LED

InteGrade Engine



Your flexible design partner

Philips InteGrade LED engine system – compact linear LED lighting for maximum freedom of design

The InteGrade LED engine system is a sustainable and energy-efficient way¹ to create an enjoyable shopping experience for customers. The system can be used for shelf and linear accent lighting. With the dedicated InteGrade connectors it is easy to create longer light lines. Thanks to the system's compact dimensions, it can be aesthetically integrated into the store interior.

The unique asymmetrical optics direct the light to where you want it, thus making optimum use of the light and energy. The products or background you want lit will be presented uniformly, while reducing glare and dark spots. Our LEDs have minimal output degradation and color shift, so the light remains consistent throughout their long service life. InteGrade LED is, quite simply, an ideal solution for high-quality lighting without flicker or color differences. Mounting accessories, cables and LED power driver are available separately.

Key benefits

- Excellent total cost of ownership
 - Energy savings of up to 65%¹
- Aesthetic integration of LED lighting, enables seamless light lines with uniform light distribution
 - Superb asymmetrical optics
- Easy to install
 - InteGrade cabling allows connection to own connector system
- Dimmable
 - Use with available Philips Advance Xitanium LED dimming controller for 0-10V dimming
- Philips 5-year limited system warranty²
 - InteGrade LED engine in combination with Philips cables and Philips Advance Xitanium LED power driver

Applications

- Shelf Lighting:
 - Supermarkets
 - Libraries
 - Retail
 - Museums



InteGrade LED engine system

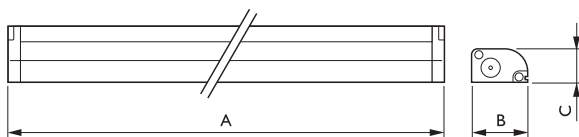
The InteGrade LED engine system consists of different components which are designed and marketed together, as we believe good system design is crucial to effective functioning of the system and facilitates an easy design-in. The system includes InteGrade LED engines, Philips Advance Xitanium LED drivers and mounting accessories.

Specifications

- The rated average life of the engines, in combination with a Philips Advance LED power driver, is B50L70 at 50,000 hours (70% lumen maintenance).³ This rated average life is based on engineering data testing and probability analysis.
- Operating temperature (performance) min -30 °C / max +30 °C.
- Storage temperature min -30 °C / max +60 °C.
- Housing color: aluminum.
- Safety Extra Low Voltage (SELV); safety is ensured even if wiring or units become damaged (only when a SELV rated power supply is used).
- Compliance and approval: ENEC⁴, UL⁵, CE⁶, RoHS⁷ and EU directive 2002/95/EC.
- The engines are suitable for the described applications on condition of typical use in damp and dry locations.

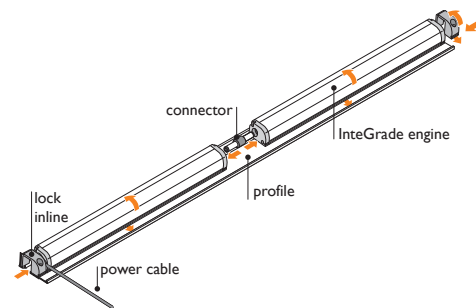
Dimensions InteGrade LED engines

InteGrade LED Engines	Dimensions (Inches)		
	A	B	C
InteGrade Engine Value 140mm (6")	5.5	0.7	0.4
InteGrade Engine Value 575mm (23")	22.6	0.7	0.4



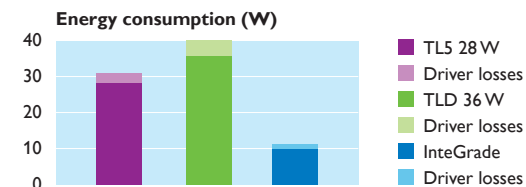
Installation advice

We advise you to consult our website for the latest up-to-date information and important detailed installation instructions. See http://www.lighting.philips.com/us_en/connect/LED_modules/inteGrade-LED-systems.wpd.

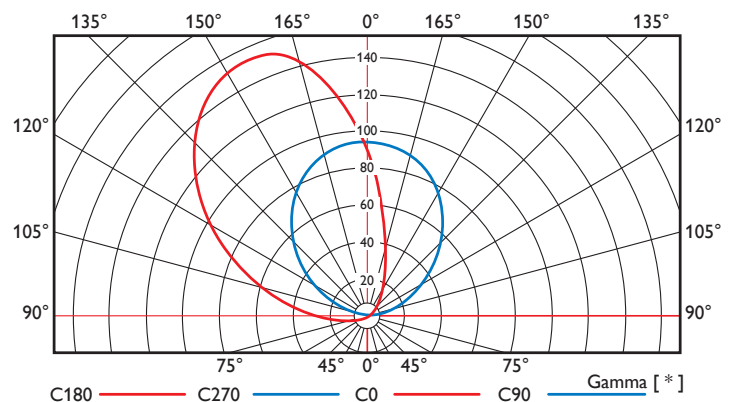


Energy savings

Energy savings are a major benefit of the InteGrade LED engines compared to TL5 and TL-D systems.



Light distribution diagram





Xitanium constant voltage outdoor driver 80W



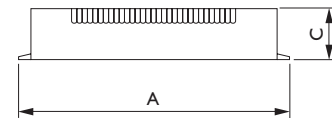
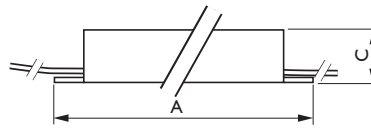
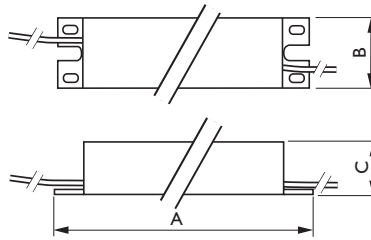
Xitanium constant voltage outdoor driver 80W

Xitanium LED power driver

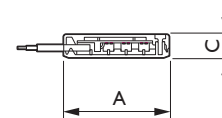
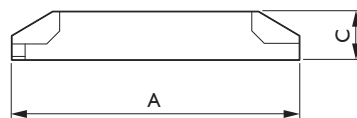
We have developed Xitanium constant voltage LED power drivers of 20 and 80W 24V that are ideal for powering the InteGrade LED engines. See ordering table at the last pages. To allow for variance in the installation, we recommend you do not load the power driver beyond 90% of its rated maximum power. Please refer to the wiring diagram in the installation guide for more details.

Dimensions Xitanium LED power driver

LED Power Driver	Dimensions (Inches)		
	A	B	C
Xitanium Constant Voltage Outdoor LED Power Driver 20W - 24V	5.9	1.5	1.1
Xitanium Constant Voltage Outdoor LED Power Driver 80W - 24V H	9.5	1.7	1.2
Xitanium Constant Voltage LED Power Driver 75W 24V PP ItG-N plug	7.1	2.4	1.2



Xitanium constant voltage outdoor driver 80W



Accessories

Power cables

The power cables are available in different lengths and colors (black and white). They are easy to connect to the engines and the driver. Specific details can be found in the design-in guide available on our website.

Mounting clips, connector and lock

There are two mounting clips available:

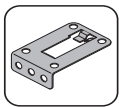
- Shelf arm mounting clip.
- Under shelf mounting clip.

These clips can be easily clicked onto the InteGrade mounting profile. The connector is used to electrically connect two LED engines. The lock fixes the engine in its profile.

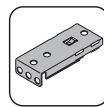
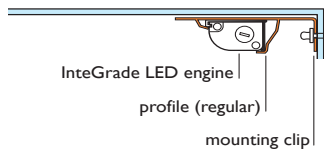
Mounting clips, connector and lock

The InteGrade profiles are made of satinated aluminum. There are two versions: one regular type that can be combined with the under shelf or shelf arm mounting clip for concealed integration below shelves or other surfaces; and one (F style) that can be screwed directly onto a surface – this profile is not only easy to install but also appealing to look at when installed visibly below a surface.

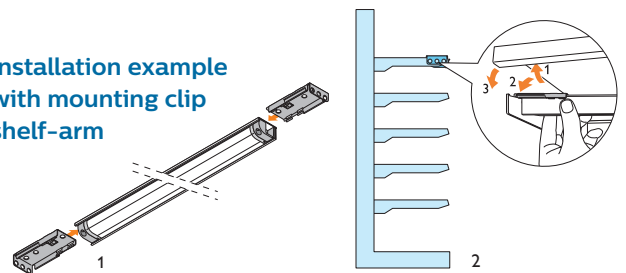
Installation Examples



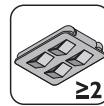
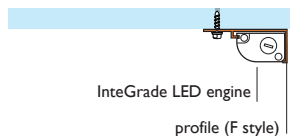
Installation of a LED engine with regular profile and mounting clip



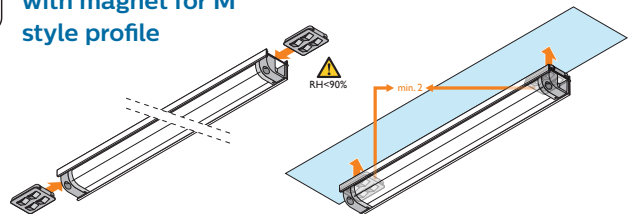
Installation example with mounting clip shelf-arm



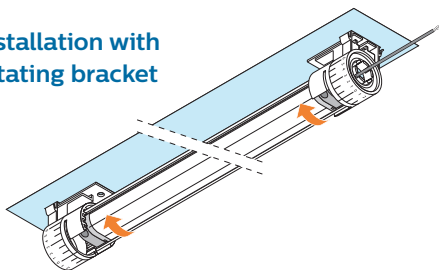
Installation of a LED engine with F style profile (no mounting clip needed)



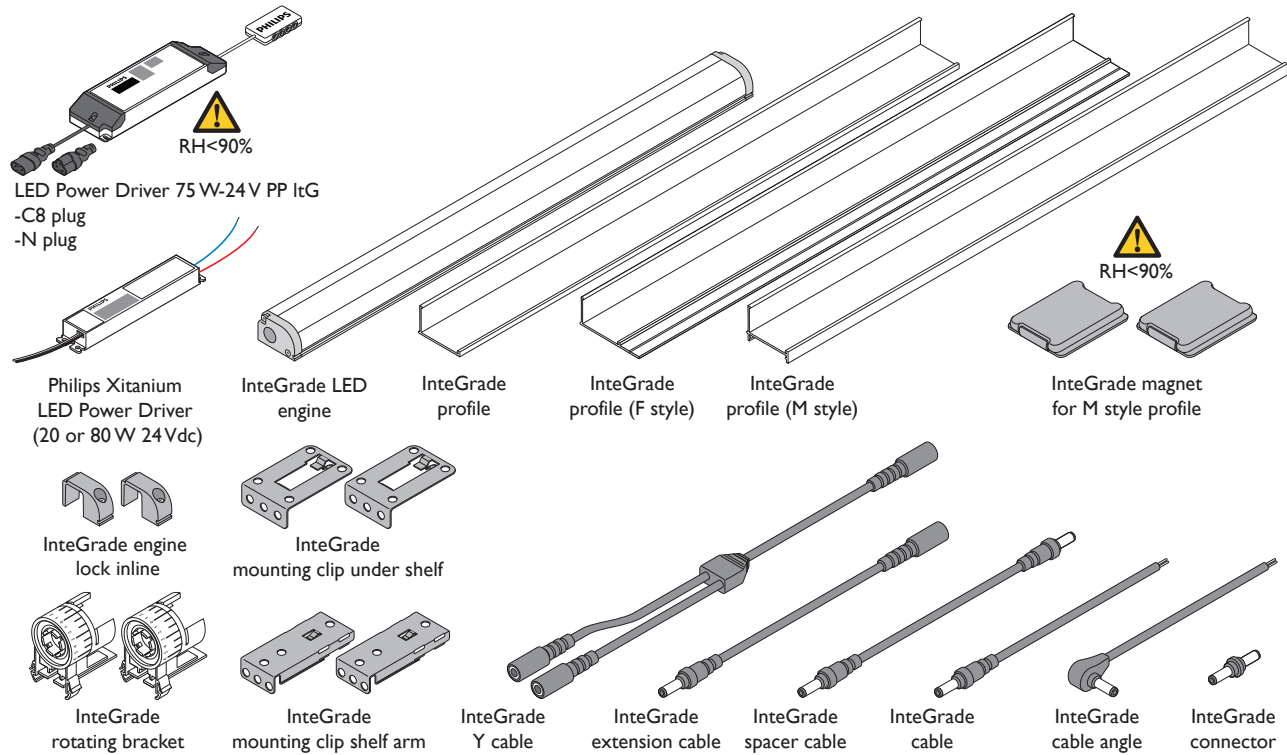
Installation example with magnet for M style profile



Installation with rotating bracket



Ordering details for InteGrade LED engine system



InteGrade LED engines⁸

	Color Temp (K) ⁹	Wattage (W) ¹⁰	Approx. Lumens ^{11,12}	CRI ¹³	Ordering Code
Eco Plus Range (Minimized Power)					
InteGrade Engine Eco 140mm (6") 865	6500	1	80	85	929000640713
InteGrade Engine Eco 575mm (23") 865	6500	4	330	85	929000640613
Value Plus Range (Regular Lumen Output)					
InteGrade Engine Value 140mm (6") 827	2700	1.2	100	85	929000861813
InteGrade Engine Value 140mm (6") 830	3000	1.2	100	85	929000646113
InteGrade Engine Value 140mm (6") 835	3500	1.2	100	85	929000655313
InteGrade Engine Value 140mm (6") 840	4100	1.2	100	85	929000646213
InteGrade Engine Value 575mm (23") 827	2700	5	400	85	929000861713
InteGrade Engine Value 575mm (23") 830	3000	5	400	85	929000646313
InteGrade Engine Value 575mm (23") 835	3500	5	400	85	929000655413
InteGrade Engine Value 575mm (23") 840	4100	5	400	85	929000646413
Vision Plus Range (High Lumen Output)					
InteGrade Engine Vision 140mm (6") 830	3000	2	170	85	929000865813
InteGrade Engine Vision 140mm (6") 835	3500	2	170	85	929000866613
InteGrade Engine Vision 140mm (6") 840	4100	2	170	85	929000866013
InteGrade Engine Vision 575mm (23") 830	3000	10	750	85	929000865713
InteGrade Engine Vision 575mm (23") 835	3500	10	750	85	929000866513
InteGrade Engine Vision 575mm (23") 840	4100	10	750	85	929000865913

Footnotes on page 7.

InteGrade LED engine system drivers, cables, connectors and accessories

	Ordering Code
Profiles	
InteGrade Profile 875mm (34")	929000643413
InteGrade Profile 1175mm (46")	929000643313
InteGrade Profile 2000mm (79")	929000654413
InteGrade Profile 2000mm (79") F style	929000654313
InteGrade Profile 2356mm (93") M style	929000871313
InteGrade Power Cables – To Connect Engine to Driver	
InteGrade Power Cable 1m (39") Black	929000641014
InteGrade Power Cable 2.5m (98") Black	929000641114
InteGrade Cable 1m (39") Black Angle	929000644614
InteGrade Cable 2.5m (98") Black Angle	929000644814
InteGrade Spacer Cable 0.5m Black	929000645014
InteGrade Power Cable 1m (39") White	929000645614
InteGrade Power Cable 2.5m (98") White	929000644514
InteGrade Cable 1m (39") White Angle	929000644714
InteGrade Cable 2.5m (98") White Angle	929000644914
InteGrade Spacer Cable 0.5m White	929000645114
InteGrade Y Cable 0.5m Black	929000874313
InteGrade Extension Cable 1.5m (59") Black	929000874413
Lock-inline – Fix Engine in Profile	
InteGrade inline lock	929000643713
Connector – Connect Engine to Engine	
InteGrade connector	929000959106
Mounting Parts	
InteGrade Mounting Clip Under Shelf	929000643903
InteGrade Mounting Clip Shelf Arm	929000957806
InteGrade Mounting Clip for T style profile	929000853213
InteGrade Magnet for M Style Profile	929000871413
InteGrade Rotating Bracket	929000874613
Power Driver	
Xitanium Constant Voltage Outdoor LED Power Driver 20W – 24V	929000654006
Xitanium Constant Voltage Outdoor LED Power Driver 80W – 24V	929000653906
Xitanium Constant Voltage Outdoor LED Power Driver 75W – 24V PP ItG-N Plug	929000869613

Footnotes

1. When comparing energy consumption of two InteGrade engine value 575mm (23") 830 with a Philips 28W T5 lamp (28W).
2. View limited warranty at <http://www.usa.lighting.philips.com/support/support/warranty> for details and restrictions.
3. L70 72,000 hours @ 35°C based on TM21 and LM80.
4. The above mentioned product has been certified on the basis of a test type according to the standard EN 62031:2008; EN 6247:2008.
5. Indicates that the LEDs are components recognized with UL and complies with UL8750 Standard for LEDs.
6. CE Declaration of conformity for Safety and Electromagnetic compatibility, Council Directive 2006/95/EC and Council Directive 2004/108/EC respectively.
7. Restrictions on Hazardous Substances (RoHS) is a European directive (2002/95/EC) designed to limit the content of 6 substances [lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE)] in electrical and electronic products. For products used in North America compliance to RoHS is voluntary and self-certified.
8. Current Specification subject to change, for the latest specifications please contact your local Philips sales representative.
9. Correlated Color Temperature with 6 SDCM range.
10. Power consumption per engine may vary +/- 20%.
11. Photometric testing consistent with LM79.
12. 100% of all production units fall between +/-20% of listed values.
13. All CRI are 80 or above.

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