



The perfect fit

Philips InteGrade LED engine system - compact linear LED lighting
for maximum freedom of design - July 2015



PHILIPS

InteGrade LED engine system

The InteGrade LED engine system is an energy-efficient way to create an enjoyable shopping experience. 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, below or inside shelves and refrigerated cabinets.

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





Benefits

- Excellent Total Cost of Ownership with attractive payback times
- Aesthetic integration of LED lighting; enables seamless light-lines with uniform light distribution
- Easy to install

Product features

- Energy savings of up to 65% (10 W compared to a 28 W TL5 system)
- Superb asymmetrical optics
- InteGrade cabling allows connection to own connector system
- 5-year Philips warranty (InteGrade LED engine in combination with Philips cables and Philips LED power driver)

Applications

- Shelf and linear accent lighting in supermarkets, refrigerated cabinets, retail environments, libraries, museums

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 it also facilitates an easy design-in. The system includes InteGrade LED engines, Xitanium drivers and mounting accessories. They facilitate hassle-free and reliable installation.

Specifications

- The rated average life of the engines, in combination with a Philips LED power driver, is B50L70 at 50,000 hours (70% lumen maintenance). 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: ENEC, UL, CE, Product safety class III, RoHS, WEEE, EU directive 2002/95/EC
- The engines are suitable for the described applications on condition of typical use in dry and damp locations.

InteGrade LED engine

Installation

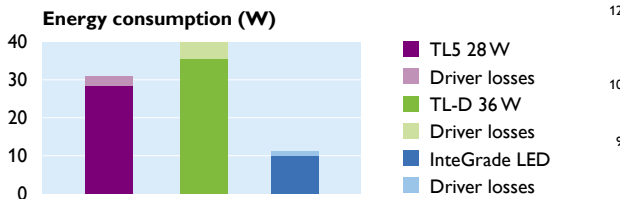


Installation advice

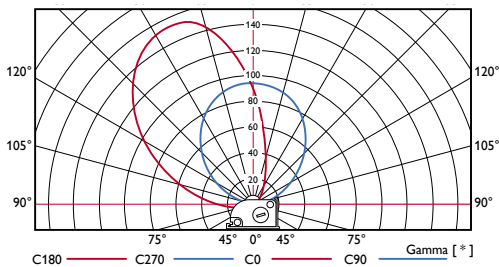
We advise you to consult our website for the latest up-to-date information and important detailed installation instructions. See www.philips.com/ledrefrigeration.

Energy savings

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



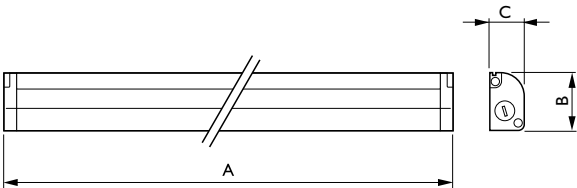
Light distribution diagram



Light distribution InteGrade LED engines, all types

Dimensions InteGrade LED engine

InteGrade LED engines	Dimensions (mm)		
	A	B	C
InteGrade LED engine 140mm(6")	140	18.5	11
InteGrade LED engine 575mm(23")	575	18.5	11

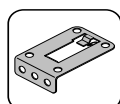


Wattage and lighting characteristics InteGrade LED engine

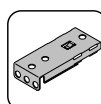
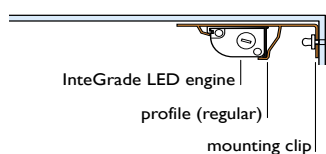
		Typical power consumption	Lumen	Color Rendering Index (typ)	Correlated Color Temperature*
		W ± 20%	Typical ± 20%	CRI typical	K
Vision	InteGrade LED engine vision 140mm (6") 830	2	170	85	3000
	InteGrade LED engine vision 140mm (6") 840	2	170	85	4100
	InteGrade LED engine vision 140mm (6") 856	2	170	85	5600
	InteGrade LED engine vision 140mm (6") WWVR	2.5	150	na	na
	InteGrade LED engine vision 575mm (23") 830	10	750	85	3000
	InteGrade LED engine vision 575mm (23") 840	10	750	85	4100
	InteGrade LED engine vision 575mm (23") 856	10	750	85	5600
	InteGrade LED engine vision 575mm (23") WWVR	10.5	650	na	na
Value	InteGrade LED engine value 140mm(6") 827	1	80	85	2700
	InteGrade LED engine value 140mm(6") 830	1	80	85	3000
	InteGrade LED engine value 140mm(6") 840	1	80	85	4100
	InteGrade LED engine value 140mm(6") WWVR	1,5	70	na	na
	InteGrade LED engine value 575mm(6") 827	5	350	85	2700
	InteGrade LED engine value 575mm(23") 830	5	350	85	3000
	InteGrade LED engine value 575mm(23") 840	5	350	85	4100
	InteGrade LED engine value 575mm(23") WWVR	5,5	310	na	na
Eco	InteGrade LED engine eco 140mm(6") 865	1	80	85	6500
	InteGrade LED engine eco 575mm(23") 865	4	330	85	6500

* Correlated color temperature within 6 SDCM range

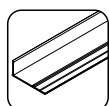
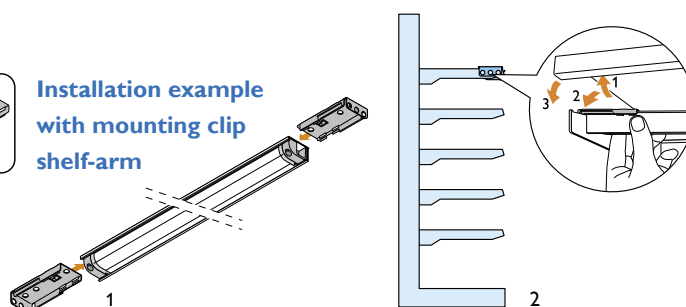
Installation examples



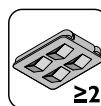
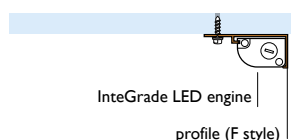
Installation of a LED engine with regular profile and mounting clip



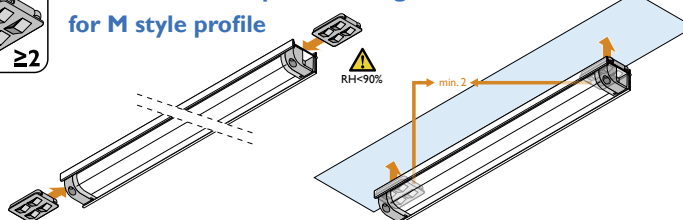
Installation example with mounting clip shelf-arm



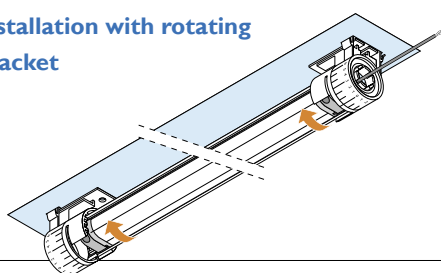
Installation of a LED engine with F style profile (no mounting clip needed)



Installation example with magnet for M style profile



Installation with rotating bracket

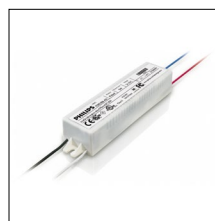
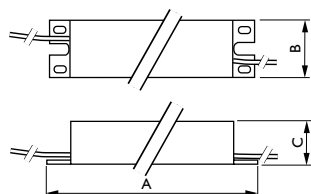


Xitanium LED power driver

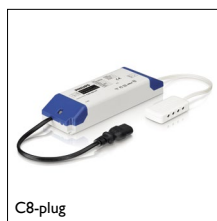
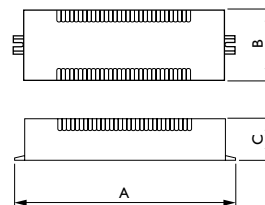
We have developed Xitanium Constant Voltage LED power drivers of 20 and 80 W 24V which are ideal for powering the InteGrade LED engines, see ordering table on the last pages. To allow for variance in the installation, we recommend you do not load the power driver beyond 90% of its rated maximum power.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



Xitanium Constant Voltage Outdoor driver 80 W



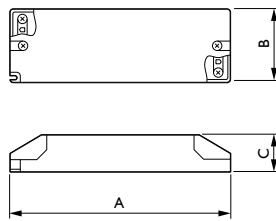
Xitanium Constant Voltage Outdoor driver 20 W



C8-plug



N-plug



Xitanium Constant Voltage LED Power Driver 75 W

* C8 is for global use. The connector fits to standard C7 to mains connectors - notul N-plug is for North America mainet and has a Na mains plug to directly connect to the mains.

Dimensions Xitanium LED power driver

LED power driver	Dimensions (mm)		
	A	B	C
Xitanium Constant Voltage Outdoor LED Power Driver 20W - 24V	150	37	27
Xitanium Constant Voltage Outdoor LED Power Driver 80W - 24V	241	43	30
Xitanium Constant Voltage LED Power Driver 75W-24V PP ItG-C8 plug*	180	60	31
Xitanium Constant Voltage LED Power Driver 75W-24V PP ItG-N plug*	180	60	31

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.

Rotating bracket

With a 360 degree rotation adjustability in 15 degree steps the rotational bracket allows maximum design

freedom. The cabinet Interface is compatible towards several cut-out patterns for TL type lamp holders.

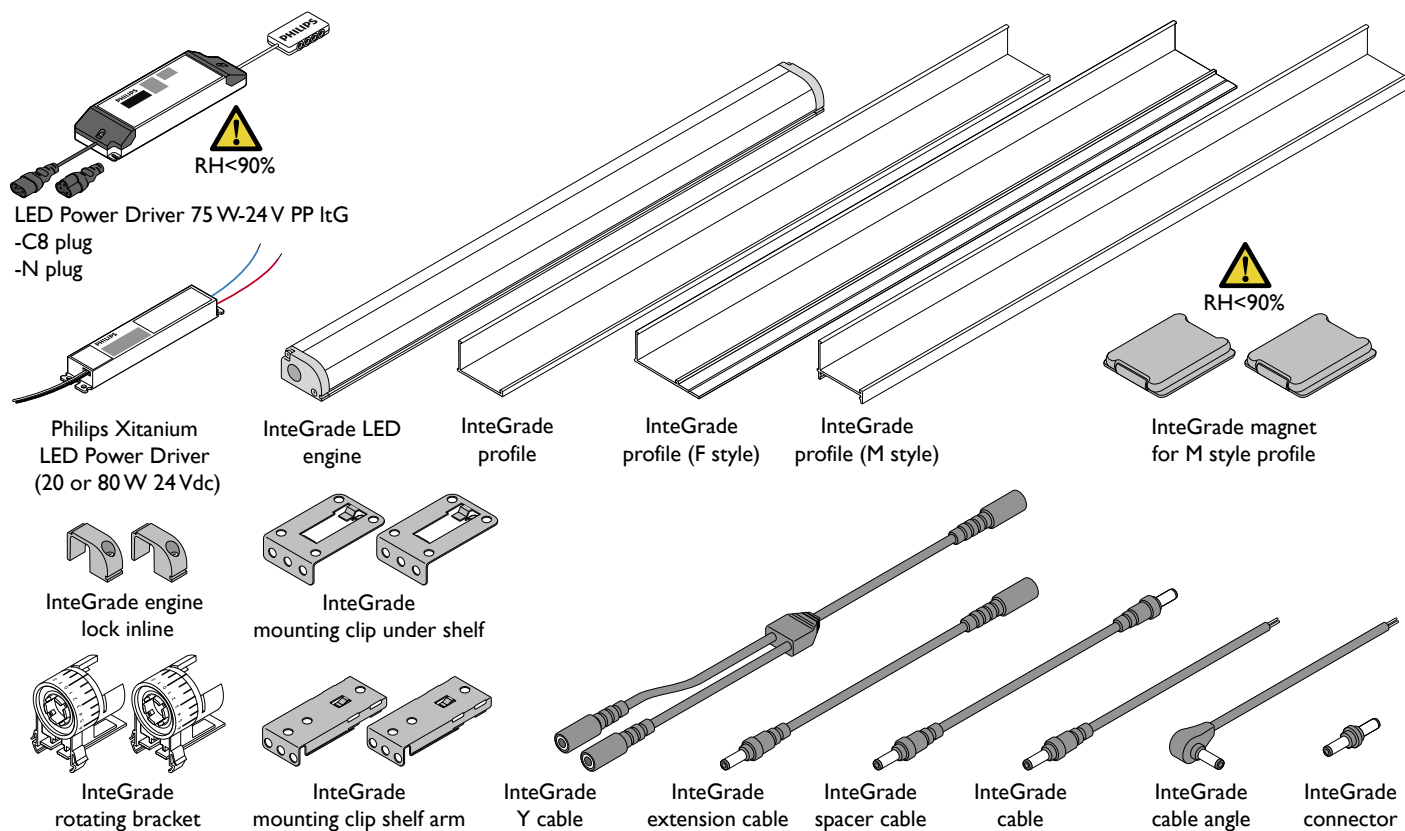
Profiles

The InteGrade profiles are made of satinated aluminum. There are two versions: one regular type which 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 with InteGrade cable angle

Ordering details for InteGrade LED engine systems



InteGrade LED engine system

		Logistic code 12 NC	Minimum order quantity pcs
Engines			
Vision	InteGrade LED engine vision 140mm (6") 830	929000865813	24
	InteGrade LED engine vision 140mm (6") 840	929000866013	24
	InteGrade LED engine vision 140mm (6") 856	929000866413	24
	InteGrade LED engine vision 140mm (6") WWR	929000866213	24
	InteGrade LED engine vision 575mm (23") 830	929000865713	24
	InteGrade LED engine vision 575mm (23") 840	929000865913	24
	InteGrade LED engine vision 575mm (23") 856	929000866313	24
	InteGrade LED engine vision 575mm (23") WWR	929000866113	24
Value	InteGrade LED engine value 140mm(6") 827*	929000861813	24
	InteGrade LED engine value 140mm(6") 830	929000646113	24
	InteGrade LED engine value 140mm(6") 840	929000646213	24
	InteGrade LED engine value 140mm(6") WWR	929000848413	24
	InteGrade LED engine value 575mm(23") 827*	929000861713	24
	InteGrade LED engine value 575mm(23") 830	929000646313	24
	InteGrade LED engine value 575mm(23") 840	929000646413	24
	InteGrade LED engine value 575mm(23") WWR	929000848513	24
Eco	InteGrade LED engine eco 140mm(6") 865	929000640713	24
	InteGrade LED engine eco 575mm(23") 865	929000640613	24

Continued on page 8

InteGrade LED engine system

	Logistic code 12 NC	Minimum order quantity pcs
Profiles		
InteGrade profile 875mm(34")	929000643413	48
InteGrade profile 1175mm(46")	929000643313	48
InteGrade profile 2000mm(79")	929000654413	48
InteGrade profile 2000mm(79") F style	929000654313	24
InteGrade profile 2000mm(79") L style	929000654513	48
InteGrade profile 2000mm(79") T style CTR	929000853013	16
InteGrade profile 2000mm(79") T style SD	929000853113	16
InteGrade profile 2356mm (93") M style	929000871313	36
InteGrade power cables - to connect engine to driver		
InteGrade power cable 1m(39") black	929000641014	24
InteGrade power cable 2.5m(98") black	929000641114	24
InteGrade cable 1m(39") black angle	929000644614	24
InteGrade cable 2.5m(98") black angle	929000644814	24
InteGrade spacer cable 0.5m black	929000645014	24
InteGrade power cable 1m(39") white	929000645614	24
InteGrade power cable 2.5m(98") white	929000644514	24
InteGrade cable 1m(39") white angle	929000644714	24
InteGrade cable 2.5m(98") white angle	929000644914	24
InteGrade spacer cable 0.5m white	929000645114	24
InteGrade Y cable black*	929000874313	24
InteGrade extension cable 1.5m(59")black	929000874413	24
Lock-inline - fix engine in profile		
InteGrade inline lock	929000643713	100
Connector - connect engine to engine		
InteGrade connector	929000959106	500
Mounting parts		
InteGrade mounting clip under shelf	929000643903	100
InteGrade mounting clip shelf arm	929000643803	100
InteGrade mounting clip for T style profile	929000853213	100
InteGrade magnet for M style profile	929000871413	100
InteGrade rotating bracket*	929000874613	100
Power driver		
Xitanium Constant Voltage Outdoor LED Power Driver 20W - 24V	929000654006	10
Xitanium Constant Voltage Outdoor LED Power Driver 80W - 24V	929000653906	10
Xitanium Constant Voltage Outdoor LED Power Driver 75W-24V PP ItG-C8 plug*	929000869713	10
Xitanium Constant Voltage Outdoor LED Power Driver 75W-24V PP ItG-N plug*	929000869613	10

* On request. For availability please contact your local sales office.



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Data subject to change.

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