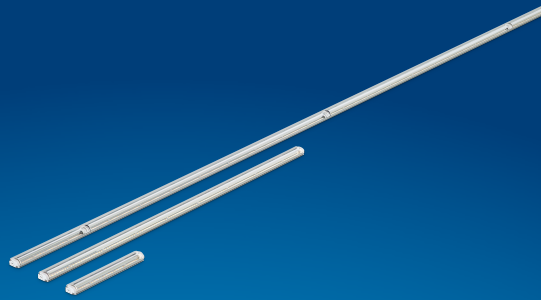


PHILIPS

InteGrade

LED

InteGrade engine HF
PW G3



Datasheet

InteGrade high flux LED system

Compact linear LED lighting for ultimate shopping experience

InteGrade engine high flux is not a standalone engine.

It might need to be integrated with a heatsink for thermal management to achieve 50,000 hrs lifetime.

The cabinet framework can be used for that. Our Design-in service is available to support you.

Key features and benefits

- Superb lumen and lux levels grabbing the customer's attention even when behind a glass door
- Exceptional uniform light distribution bringing light right down to the lowest shelf
- Enhanced whites and astonishingly rich colors while also offering superior light quality thanks to a typical CRI 93.
- Long life-time: >50,000 hours when integrated with a heatsink
- Miniaturized slim design for aesthetic integration
- Continuous line of light to eliminate undesirable hot spots, glare, reflections
- Maximum design flexibility with extensive range of engine lengths, color temperatures, and accessories
- True System proposition with Xitanium Constant Voltage LED power drivers
- Five year system warranty
- Dimmable

June 2017

Ordering data

Commercial product name	EOC	12NC	Box quantity
InteGrade engine HF 140mm 930 PW G3	8718696 759196 00	9290 016 05606	24
InteGrade engine HF 575mm 930 PW G3	8718696 759813 00	9290 016 05706	24
InteGrade engine HF 1150mm 930 PW G3	8718696 759677 00	9290 016 05806	24
InteGrade engine HF 140mm 940 PW G3	8718696 759219 00	9290 016 05906	24
InteGrade engine HF 575mm 940 PW G3	8718696 759837 00	9290 016 06006	24
InteGrade engine HF 1150mm 940 PW G3	8718696 759691 00	9290 016 06106	24

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _c (case temperature at T _c point)	45	45	70	°C

* Nominal value at which typical performance is specified

** Value at which life time is specified

*** Maximum value for safe operation, do not operate above this value

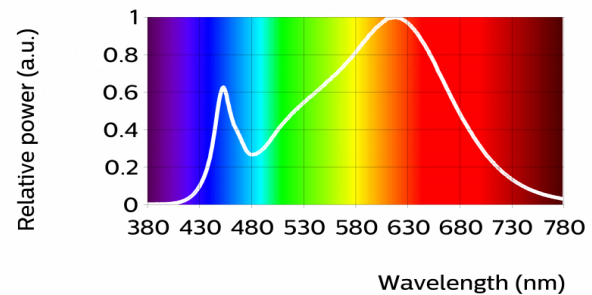
Optical characteristics - table per color (CCT)

InteGrade engine HF 140mm 930 PW G3

Parameter	Min	Typ	Max	Unit
Luminous flux	320	400	480	lm
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.419, 0.384)		-
Color consistency			5	SDCM
CRI	90	93		
Photobiological safety			RG1	
Energy efficiency label		A++		

R9 of 60, typical value

Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5

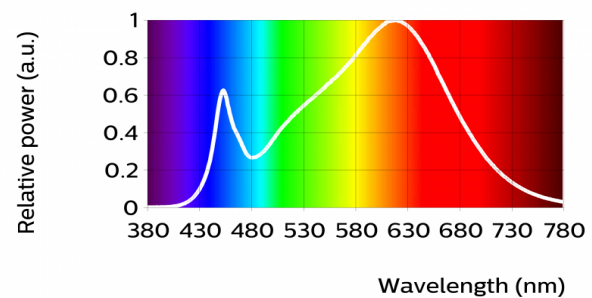


InteGrade engine HF 575mm 930 PW G3

Parameter	Min	Typ	Max	Unit
Luminous flux	1260	1575	1890	lm
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.419, 0.384)		-
Color consistency			5	SDCM
CRI	90	93		
Photobiological safety			RG1	
Energy efficiency label		A+		

R9 of 60, typical value

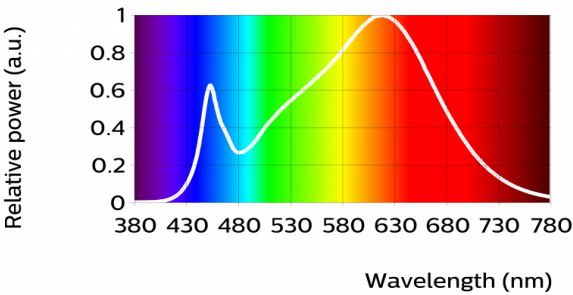
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine HF 1150mm 930 PW G3

Parameter	Min	Typ	Max	Unit
Luminous flux	2520	3150	3780	lm
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.419, 0.384)		-
Color consistency			5	SDCM
CRI	90	93		
Photobiological safety			RG1	
Energy efficiency label		A+		

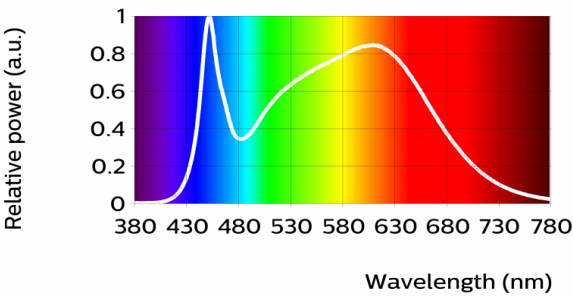
R9 of 60, typical value
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine HF 140mm 940 PW G3

Parameter	Min	Typ	Max	Unit
Luminous flux	320	400	480	lm
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.360)		-
Color consistency			5	SDCM
CRI	90	93		
Photobiological safety			RG1	
Energy efficiency label		A+		

R9 of 60, typical value
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5

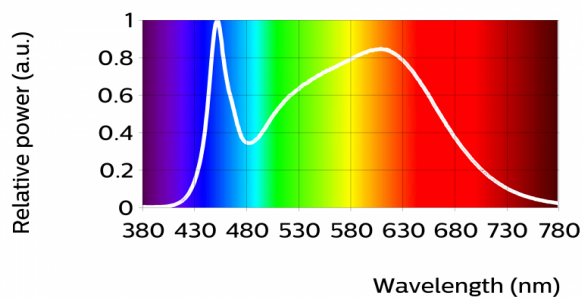


InteGrade engine HF 575mm 940 PW G3

Parameter	Min	Typ	Max	Unit
Luminous flux	1260	1575	1890	lm
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.360)		-
Color consistency			5	SDCM
CRI	90	93		
Photobiological safety			RG1	
Energy efficiency label		A+		

R9 of 60, typical value

Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5

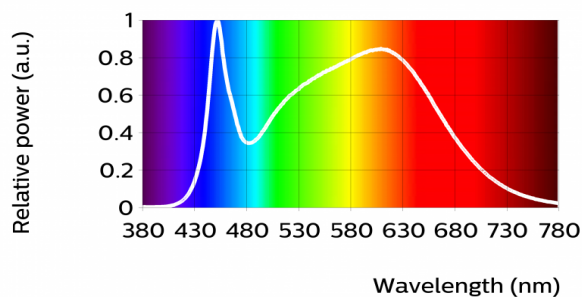


InteGrade engine HF 1150mm 940 PW G3

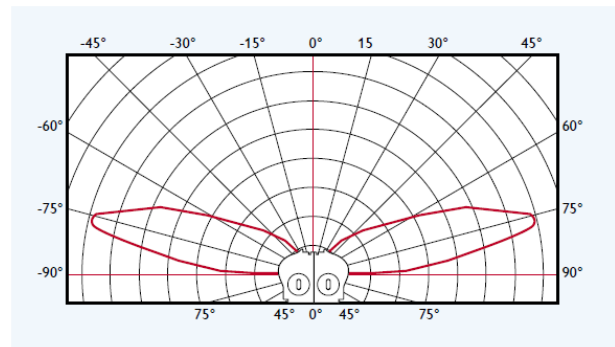
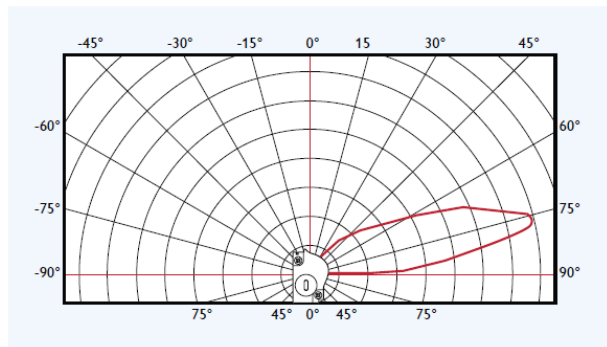
Parameter	Min	Typ	Max	Unit
Luminous flux	2520	3150	3780	lm
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.360)		-
Color consistency			5	SDCM
CRI	90	93		
Photobiological safety			RG1	
Energy efficiency label		A+		

R9 of 60, typical value

Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



Beam shape



Electrical characteristics

InteGrade engine HF 140mm 930 PW G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		4.4		W
Number of modules in series per chain			8	

InteGrade engine HF 575mm 930 PW G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		17.5		W
Number of modules in series per chain			2	

InteGrade engine HF 1150mm 930 PW G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		34.9		W
Number of modules in series per chain			1	

InteGrade engine HF 140mm 940 PW G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		4.0		W
Number of modules in series per chain			8	

InteGrade engine HF 575mm 940 PW G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		16.1		W
Number of modules in series per chain			2	

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		32.2		W
Number of modules in series per chain			1	

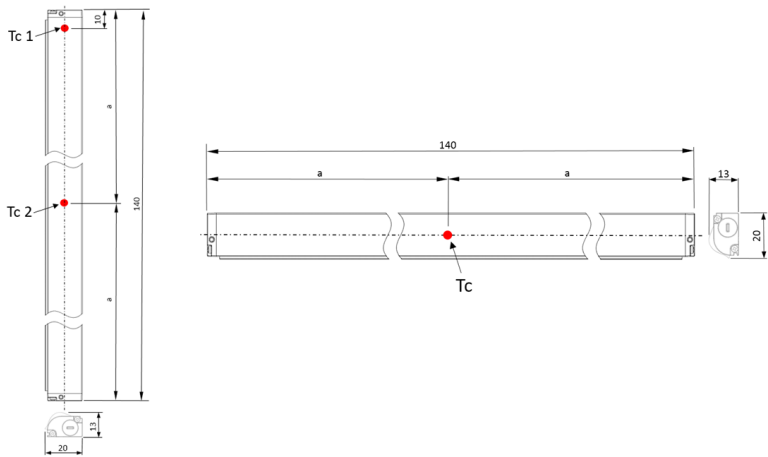
Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80		
		B50	B20	B10	B50	B20	B10
	Tc 35°C	67	66	65	42	41	40
	Tc 45°C	62	61	60	39	38	37

Mechanical characteristics

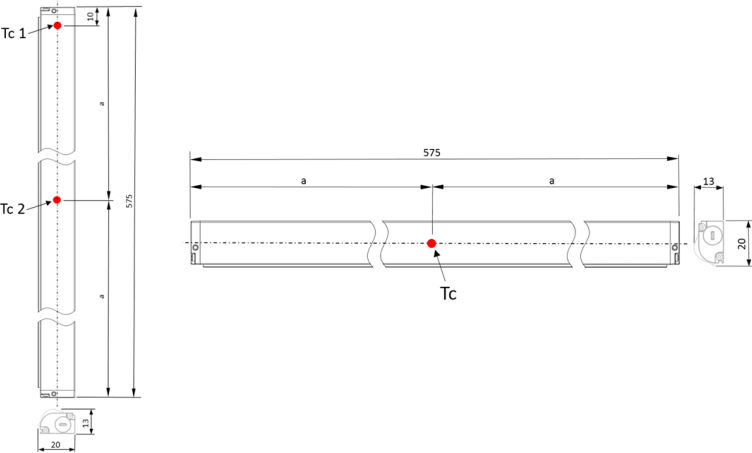
InteGrade engine HF 140mm 930 PW G3
 InteGrade engine HF 140mm 940 PW G3

Parameter	Min	Typ	Max	Unit
Length		140		mm
Width		18.5		mm
Height		11		mm



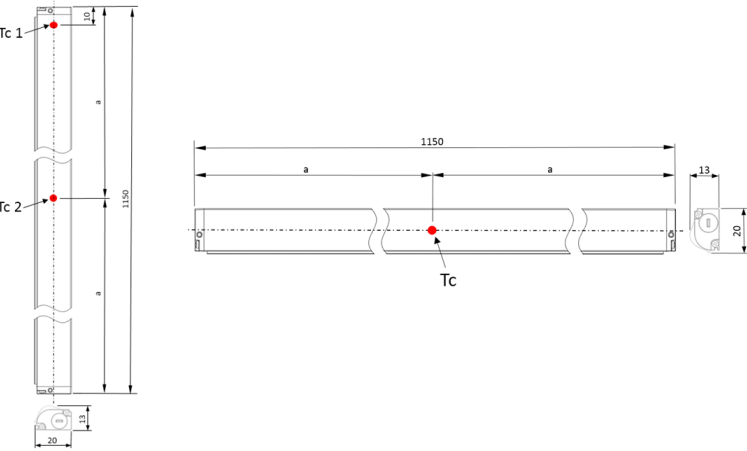
InteGrade engine HF 575mm 930 PW G3
InteGrade engine HF 575mm 940 PW G3

Parameter	Min	Typ	Max	Unit
Length		575		mm
Width		18.5		mm
Height		11		mm



InteGrade engine HF 1150mm 930 PW G3
InteGrade engine HF 1150mm 940 PW G3

Parameter	Min	Typ	Max	Unit
Length		1150		mm
Width		18.5		mm
Height		11		mm



Absolute ratings

Parameter	Min	Typ	Max	Unit
Case temperature (Tc-max)			70	°C
ESD (direct contact)			4	kV
ESD (air)			8	kV
Storage temperature	-30		60	°C

Application information

Certificates and Standards

IEC/EN 62031

IEC/EN 62471

Relevant clauses of IEC/EN 60335-2-89

Relevant clauses of IEC/EN 60335-2-24

Relevant clauses of IEC/EN 60335-1

UL 2108

CSA C22.2 No.9

NSF

Environmental

RoHS/REACH

Application

IP rating	No IP-rating, fit for use in coolers and freezers
Overheating protection	No protection
Luminaire class	IEC Class III if connected to a SELV driver
Dimming	Yes

The InteGrade system is certified with Philips LED Power drivers



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