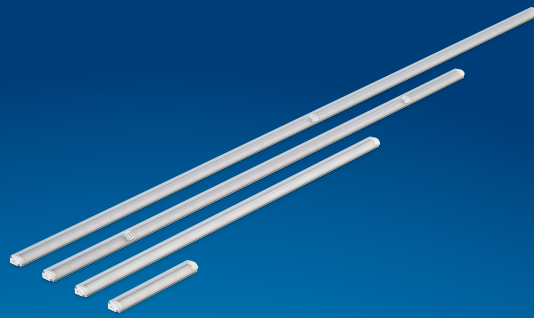


PHILIPS

InteGrade

LED

InteGrade engine UB
vision G3



Datasheet

InteGrade LED system

Compact linear LED lighting for ultimate shopping experience

Key features and benefits

- State-of-art Efficacy up to 105 lm/W
- Uniform light distribution due to its breakthrough optical design
- Natural merchandise color with specially formulated CRI90 LEDs
- Food version featuring a single color line of light
- Miniaturized slim design for aesthetic integration
- Continuous line of light to eliminate undesirable hot spots, glare, reflections
- Long life-time: >50,000 hours
- 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

February 2019



Ordering data

Commercial product name	EOC	12NC	Box quantity
InteGrade engine UB Vi 140mm 930 G3	8718696 744390 00	9290 015 78506	24
InteGrade engine UB Vi 140mm 940 G3	8718696 744413 00	9290 015 78906	24
InteGrade engine UB Vi 140mm WWR G3	8718696 744437 00	9290 015 79306	24
InteGrade engine UB Vi 575mm 930 G3	8718696 745878 00	9290 015 78606	24
InteGrade engine UB Vi 575mm 940 G3	8718696 745892 00	9290 015 79006	24
InteGrade engine UB Vi 575mm WWR G3	8718696 745915 00	9290 015 79406	24
InteGrade engine UB Vi 855mm 930 G3	8718696 746059 00	9290 015 78706	24
InteGrade engine UB Vi 855mm 940 G3	8718696 746073 00	9290 015 79106	24
InteGrade engine UB Vi 855mm WWR G3	8718696 746097 00	9290 015 79506	24
InteGrade engine UB Vi 855mm XR G3	8718699 655075 00	9290 016 80306	24
InteGrade engine UB Vi 1150mm 930 G3	8718696 745618 00	9290 015 78806	24
InteGrade engine UB Vi 1150mm 940 G3	8718696 745632 00	9290 015 79206	24
InteGrade engine UB Vi 1150mm 956 G3	8718699 666064 00	9290 014 98206	24
InteGrade engine UB Vi 1150mm WWR G3	8718696 745656 00	9290 015 79606	24
InteGrade engine UB Vi 1150mm XR G3	8718699 655099 00	9290 016 80406	24

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _a (ambient temperature)	25	30	30	°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

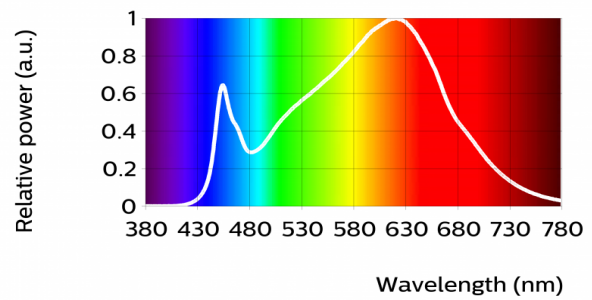
Optical characteristics - table per color (CCT)

InteGrade engine UB Vi 140mm 930 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	192	240	288	lm
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		27		deg
Photobiological safety			RG1 unlimited	

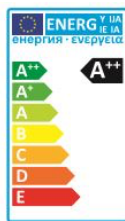


Measurement precision for flux +/- 5%, for efficacy +/- 6%, for x, y +/- 0.005, for CRI +/- 1.5

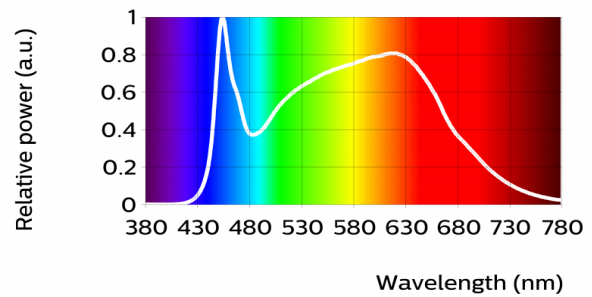


InteGrade engine UB Vi 140mm 940 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	208	260	312	lm
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.381, 0.379)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		27		deg
Photobiological safety			RG1 unlimited	



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

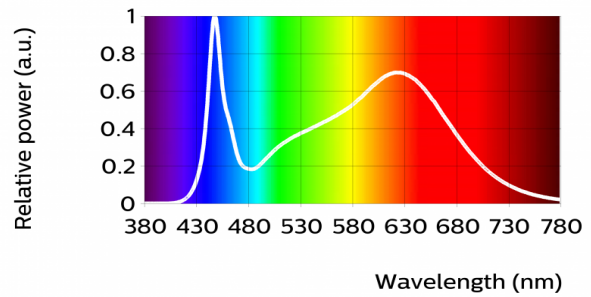


InteGrade engine UB Vi 140mm WWR G3

Parameter	Min	Typ	Max	Unit
Luminous flux	140	175	210	lm
Color coordinates (CIEx, CIEy)		(0.386, 0.329)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		27		deg
Photobiological safety			RG1 unlimited	

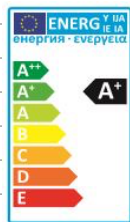


Measurement precision for flux +/- 5%, for efficacy +/- 6%, for x, y +/- 0.005, for CRI +/- 1.5

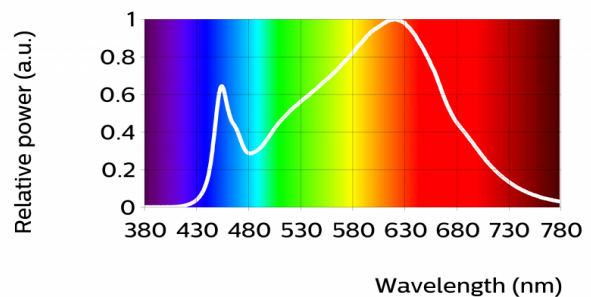


InteGrade engine UB Vi 575mm 930 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	760	950	1140	lm
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		27		deg
Photobiological safety			RG1 unlimited	



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

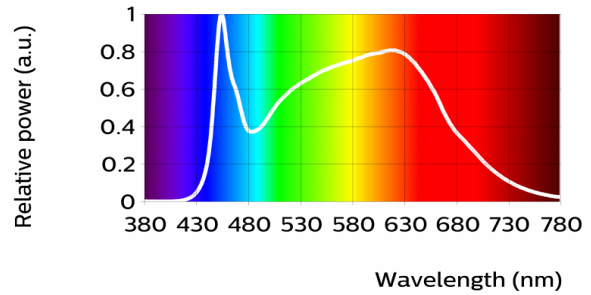


InteGrade engine UB Vi 575mm 940 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	840	1050	1260	lm
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.381, 0.379)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		27		deg
Photobiological safety			RG1 unlimited	

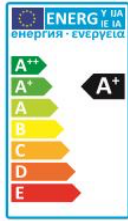


Measurement precision for flux +/- 5%, for efficacy +/- 6%, for x, y +/- 0.005, for CRI +/- 1.5

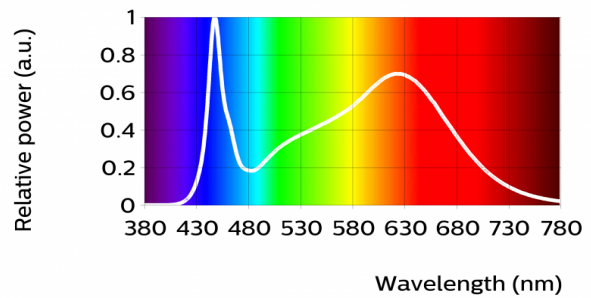


InteGrade engine UB Vi 575mm WWR G3

Parameter	Min	Typ	Max	Unit
Luminous flux	560	700	840	lm
Color coordinates (CIEx, CIEy)		(0.386, 0.329)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		27		deg
Photobiological safety			RG1 unlimited	



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

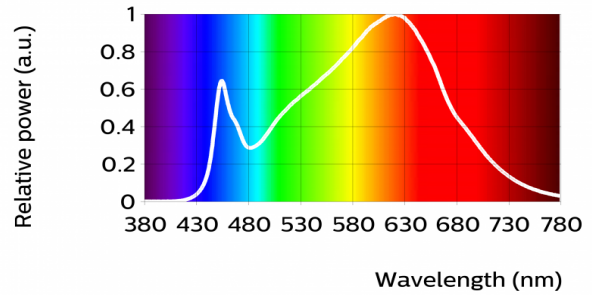


InteGrade engine UB Vi 855mm 930 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	1160	1450	1740	lm
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		27		deg
Photobiological safety			RG1 unlimited	



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

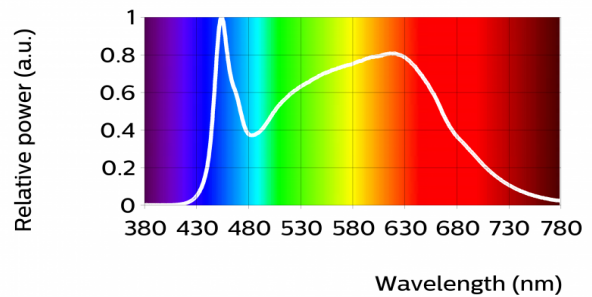


InteGrade engine UB Vi 855mm 940 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	1280	1600	1920	lm
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.381, 0.379)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		27		deg
Photobiological safety			RG1 unlimited	



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

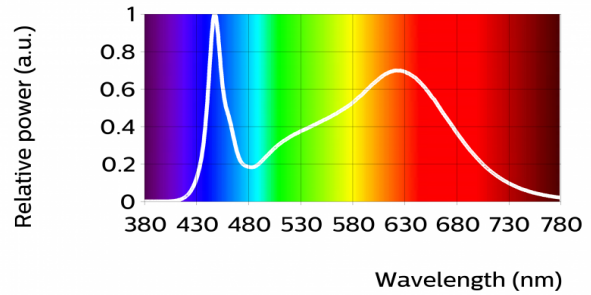


InteGrade engine UB Vi 855mm WWR G3

Parameter	Min	Typ	Max	Unit
Luminous flux	840	1050	1260	lm
Color coordinates (CIEx, CIEy)		(0.386, 0.329)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		27		deg
Photobiological safety			RG1 unlimited	



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

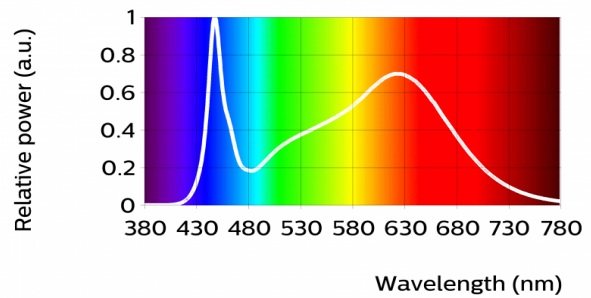


InteGrade engine UB Vi 855mm XR G3

Parameter	Min	Typ	Max	Unit
Luminous flux	680	850	1020	lm
Color coordinates (CIEx, CIEy)		(0.461, 0.351)		-
Color consistency			5	SDCM
CRI	80			
Radiation angle		27		deg
Photobiological safety			RG1 unlimited	



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

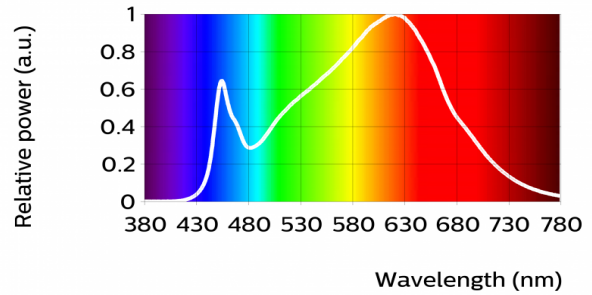


InteGrade engine UB Vi 1150mm 930 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	1560	1950	2340	lm
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		27		deg
Photobiological safety			RG1 unlimited	



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

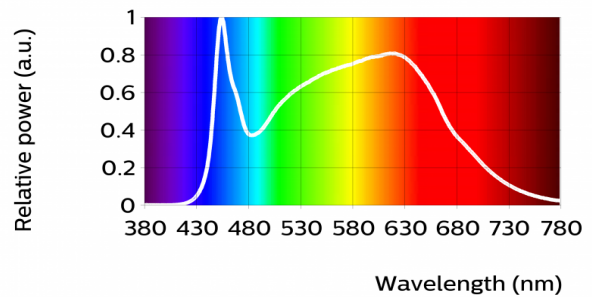


InteGrade engine UB Vi 1150mm 940 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	1680	2100	2520	lm
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.381, 0.379)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		27		deg
Photobiological safety			RG1 unlimited	



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

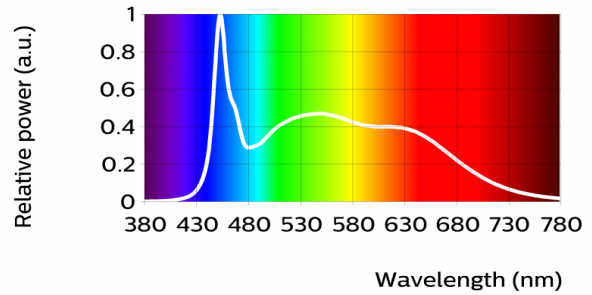


InteGrade engine UB Vi 1150mm 956 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	1760	2200	2640	lm
Correlated color temperature (CCT)		5600		K
Color coordinates (CIEx, CIEy)		(0.332, 0.347)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		27		deg
Photobiological safety			RG1 unlimited	



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

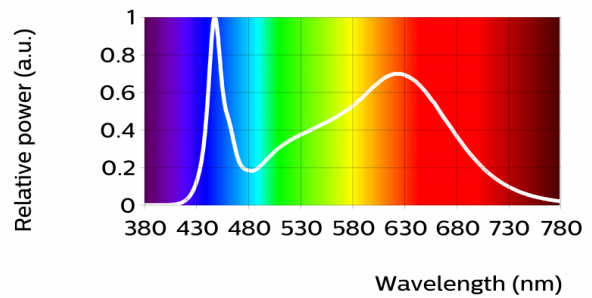


InteGrade engine UB Vi 1150mm WWR G3

Parameter	Min	Typ	Max	Unit
Luminous flux	1120	1400	1680	lm
Color coordinates (CIEx, CIEy)		(0.386, 0.329)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		27		deg
Photobiological safety			RG1 unlimited	



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

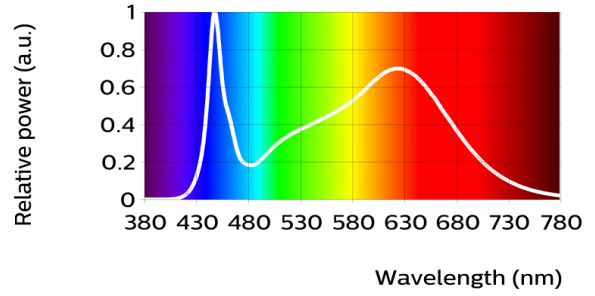


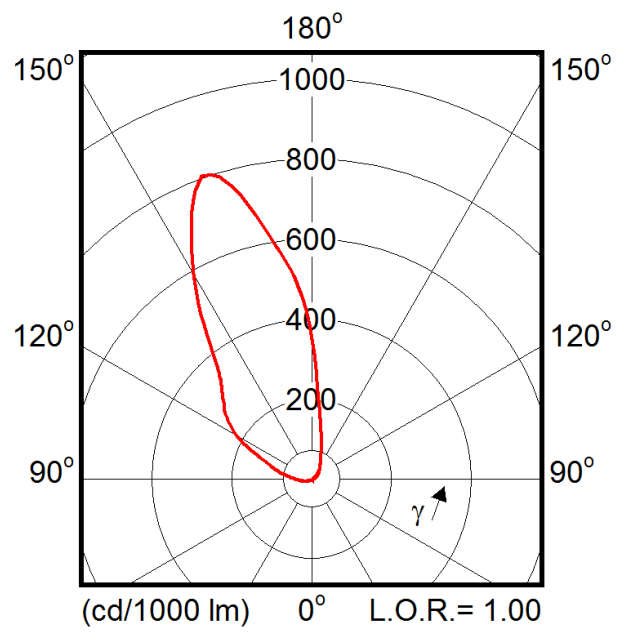
InteGrade engine UB Vi 1150mm XR G3

Parameter	Min	Typ	Max	Unit
Luminous flux	920	1150	1380	lm
Color coordinates (CIEx, CIEy)		(0.461, 0.351)		-
Color consistency			5	SDCM
CRI	80			
Radiation angle		27		deg
Photobiological safety			RG1 unlimited	



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





Electrical characteristics

InteGrade engine UB Vi 140mm 930 G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		2.6		W = kWh/1000h
Number of modules in series per chain			12	
Measurement precision for power +/- 3.3%				

InteGrade engine UB Vi 140mm 940 G3

Parameter	Min	Typ	Max	Unit
Power consumption		2.6		W = kWh/1000h
Number of modules in series per chain			12	
Measurement precision for power +/- 3.3%				

InteGrade engine UB Vi 140mm WWR G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		1.9		W = kWh/1000h
Number of modules in series per chain			12	
Measurement precision for power +/- 3.3%				

InteGrade engine UB Vi 575mm 930 G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		10.0		W = kWh/1000h
Number of modules in series per chain			3	
Measurement precision for power +/- 3.3%				

InteGrade engine UB Vi 575mm 940 G3

Parameter	Min	Typ	Max	Unit
Power consumption		10.0		W = kWh/1000h
Number of modules in series per chain			3	
Measurement precision for power +/- 3.3%				

InteGrade engine UB Vi 575mm WWR G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		7.5		W = kWh/1000h
Number of modules in series per chain			3	
Measurement precision for power +/- 3.3%				

InteGrade engine UB Vi 855mm 930 G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		15.0		W = kWh/1000h
Number of modules in series per chain			2	
Measurement precision for power +/- 3.3%				

InteGrade engine UB Vi 855mm 940 G3

Parameter	Min	Typ	Max	Unit
Power consumption		15.0		W = kWh/1000h
Number of modules in series per chain			2	

InteGrade engine UB Vi 855mm WWR G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		11.0		W = kWh/1000h
Number of modules in series per chain			2	
Measurement precision for power +/- 3.3%				

InteGrade engine UB Vi 855mm XR G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		11.3		W = kWh/1000h
Number of modules in series per chain			2	
Measurement precision for power +/- 3.3%				

InteGrade engine UB Vi 1150mm 930 G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		20.0		W = kWh/1000h
Number of modules in series per chain			1	
Measurement precision for power +/- 3.3%				

InteGrade engine UB Vi 1150mm 940 G3

Parameter	Min	Typ	Max	Unit
Power consumption		20.0		W = kWh/1000h
Number of modules in series per chain			1	

InteGrade engine UB Vi 1150mm WWR G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		15.0		W = kWh/1000h
Number of modules in series per chain			1	
Measurement precision for power +/- 3.3%				

InteGrade engine UB Vi 1150mm XR G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		15.0		W = kWh/1000h
Number of modules in series per chain			1	
Measurement precision for power +/- 3.3%				

Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80		
		B50	B20	B10	B50	B20	B10
Ta -20°C		>75	>75	>75	60	59	59
Ta 5°C		71	70	69	44	43	43
Ta 30°C		54	53	53	34	33	33

Lifetime

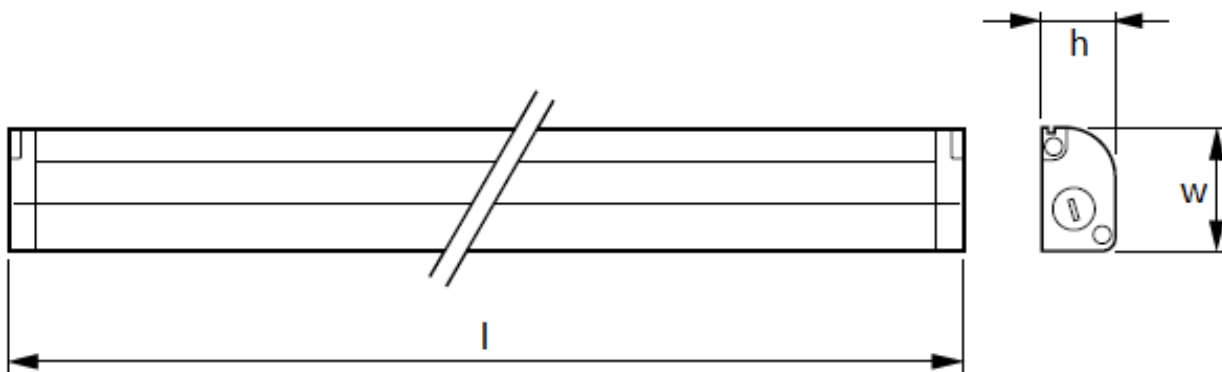
Parameter	Value	Unit
M70F50 nominal	78000	hours
M70F50 life	74000	hours

Switching cycles in accordance to EU 1194/2012: >15000.

Mechanical characteristics

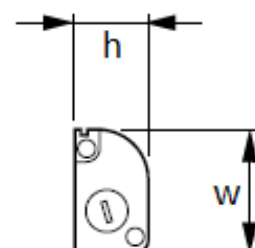
InteGrade engine UB Vi 140mm 930 G3
 InteGrade engine UB Vi 140mm 940 G3
 InteGrade engine UB Vi 140mm WWR G3

Parameter	Min	Typ	Max	Unit
Length	136	140	144	mm
Width	18.2	18.5	18.7	mm
Height	10.5	11	13.5	mm
Product mass		30		gram



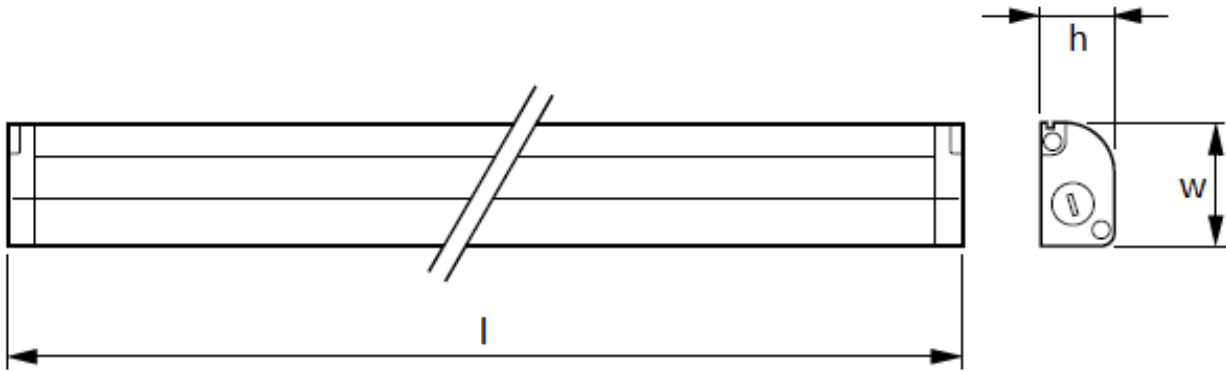
InteGrade engine UB Vi 575mm 930 G3
 InteGrade engine UB Vi 575mm 940 G3
 InteGrade engine UB Vi 575mm WWR G3

Parameter	Min	Typ	Max	Unit
Length	571	575	579	mm
Width	18.2	18.5	18.7	mm
Height	10.5	11	13.5	mm
Product mass		140		gram



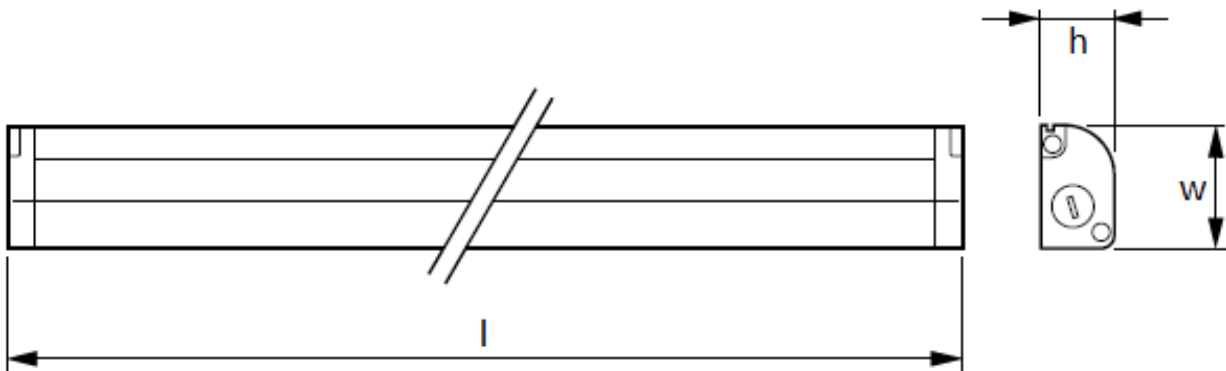
InteGrade engine UB Vi 855mm 930 G3
 InteGrade engine UB Vi 855mm 940 G3
 InteGrade engine UB Vi 855mm WWR G3
 InteGrade engine UB Vi 855mm XR G3

Parameter	Min	Typ	Max	Unit
Length	851	855	859	mm
Width	18.2	18.5	18.7	mm
Height	10.5	11	13.5	mm
Product mass		184		gram



InteGrade engine UB Vi 1150mm 930 G3
 InteGrade engine UB Vi 1150mm 940 G3
 InteGrade engine UB Vi 1150mm 956 G3
 InteGrade engine UB Vi 1150mm WWR G3
 InteGrade engine UB Vi 1150mm XR G3

Parameter	Min	Typ	Max	Unit
Length	1146	1150	1154	mm
Width	18.2	18.5	18.7	mm
Height	10.5	11	13.5	mm
Product mass		247		gram



Absolute ratings

Parameter	Min	Max	Unit
ESD (direct contact)		4	kV
ESD (air)		8	kV
Ambient temperature	-30	30	°C
Storage temperature	-30	60	°C

Application information

Certificates and Standards

IEC/EN 62031

IEC/EN 62471

Relevant clauses of IEC/EN 60335-1

Annex BB of IEC/EN 60335-2-89

Annex CC of IEC/EN 60335-2-24

CSA C22.2 No.9

UL 2108

NSF (allows usage in the vicinity of Food)

ENEC

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 the household standard compliant SELV Philips LED Power drivers

Notes

Special colors; Modules with WWR and XR color are special purpose modules for refrigerated cabinets, not for general lighting.



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01/02/2019