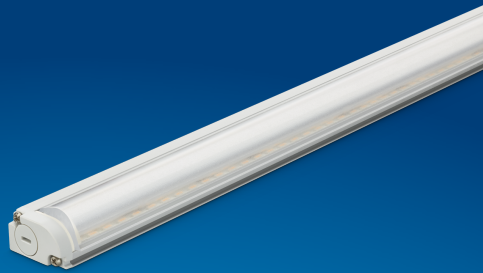


PHILIPS

InteGrade

LED

InteGrade engine UB
vision G4



Datasheet

Key features and benefits

- Miniaturized slim design for aesthetic integration
- Premium color consistency up to 5SDCM over lifetime
- Natural merchandise color with specially formulated LEDs up to CRI95
- State of the Art LED diode delivering up to 180 lm/W
- Modules performing up to 119 lm/w meeting SLR (Single Lighting Regulation)
- Optical design for uniform light distribution bringing light right down to the lowest shelf
- Maximum design flexibility with extensive range of engine lengths
- Color temperatures (5600K & WWR)
- True System proposition with five-year system warranty with Philips LED Power Drivers
- Reduced power consumption for energy saving
- Long lifetime: >50,000 hours
- Dimmable

January 2024



Ordering data

Commercial product name	EOC	12NC	Box quantity
InteGrade engine UB Vi 140mm WWR G4	8718699 743628 00	9290 021 52506	24
InteGrade engine UB Vi 575mm WWR G4	8718699 743680 00	9290 021 52806	24
InteGrade engine UB Vi 760mm 956 G4	8718699 756970 00	9290 021 85706	24
InteGrade engine UB Vi 760mm WWR G4	8718699 756994 00	9290 021 85806	24
InteGrade engine UB Vi 855mm 956 G4	8718699 743840 00	9290 021 53606	24
InteGrade engine UB Vi 855mm WWR G4	8718699 743741 00	9290 021 53106	24
InteGrade engine UB Vi 1150mm 956 G4	8718699 743826 00	9290 021 53506	24
InteGrade engine UB Vi 1150mm WWR G4	8718699 743802 00	9290 021 53406	24

Key Specifications at Nominal conditions

Name	12NC	Power (W)	Luminous Flux (lm)	Useful Flux (lm)	CRI
InteGrade engine UB Vi 140mm WWR G4	9290 021 52506	1.62	173	149	
InteGrade engine UB Vi 575mm WWR G4	9290 021 52806	6.57	701	603	
InteGrade engine UB Vi 760mm 956 G4	9290 021 85706	12.7	1510	1299	90
InteGrade engine UB Vi 760mm WWR G4	9290 021 85806	8.60	918	789	
InteGrade engine UB Vi 855mm 956 G4	9290 021 53606	14.3	1692	1455	90
InteGrade engine UB Vi 855mm WWR G4	9290 021 53106	9.81	1046	900	
InteGrade engine UB Vi 1150mm 956 G4	9290 021 53506	19.3	2285	1965	90
InteGrade engine UB Vi 1150mm WWR G4	9290 021 53406	13.1	1401	1205	

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _a (ambient temperature)	25	30	50	°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)

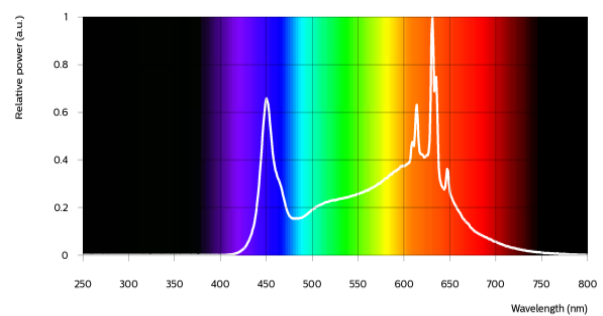
InteGrade engine UB Vi 140mm WWR G4

Parameter	Min	Typ	Max	Unit
Luminous flux	160	173	207	lm
Flux within 120° cone		149		lm
Efficacy		107		lm/W
Color coordinates (CIEx, CIEy)		(0.384, 0.326)		-
Color consistency			3	SDCM
R9	-50			
Radiation angle		27		deg
Peak intensity		129		cd
Photobiological safety			RG1 unlimited	

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

Color rendering according to IES TM-30 is 90.

WWR products are special purpose products. They are not intended for in-house use.



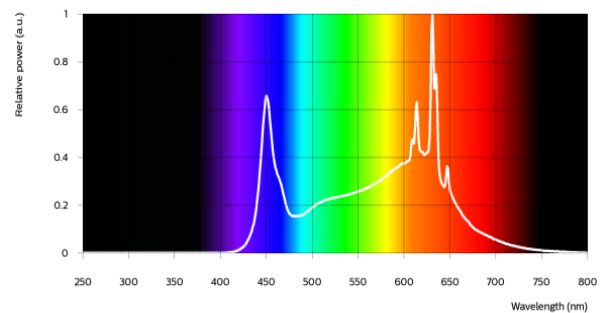
InteGrade engine UB Vi 575mm WWR G4

Parameter	Min	Typ	Max	Unit
Luminous flux	648	701	841	lm
Flux within 120° cone		603		lm
Efficacy		107		lm/W
Color coordinates (CIEx, CIEy)		(0.384, 0.326)		-
Color consistency			3	SDCM
R9	-50			
Radiation angle		27		deg
Peak intensity		521		cd
Photobiological safety			RG1 unlimited	

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

Color rendering according to IES TM-30 is 90.

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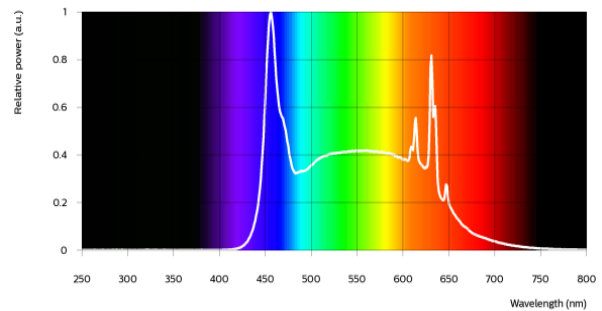


InteGrade engine UB Vi 760mm 956 G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1396	1510	1812	lm
Flux within 120° cone		1299		lm
Efficacy		119		lm/W
Correlated color temperature (CCT)		5600		K
Color coordinates (CIEx, CIEy)		(0.333, 0.350)		-
Color consistency			5	SDCM
CRI	90	92		
R9	55			
Photometric code		956/579		
Radiation angle		27		deg
Peak intensity		1123		cd
Photobiological safety			RG1 unlimited	



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



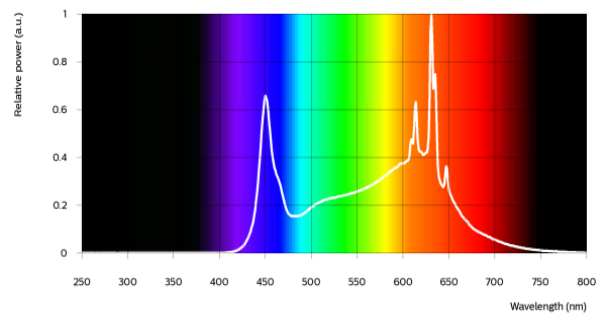
InteGrade engine UB Vi 760mm WWR G4

Parameter	Min	Typ	Max	Unit
Luminous flux	849	918	1102	lm
Flux within 120° cone		789		lm
Efficacy		107		lm/W
Color coordinates (CIEx, CIEy)		(0.384, 0.326)		-
Color consistency			3	SDCM
R9	-50			
Radiation angle		27		deg
Peak intensity		683		cd
Photobiological safety			RG1 unlimited	

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

Color rendering according to IES TM-30 is 90.

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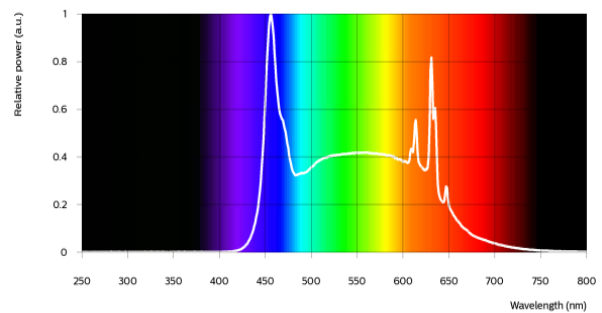


InteGrade engine UB Vi 855mm 956 G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1565	1692	2031	lm
Flux within 120° cone		1455		lm
Efficacy		118		lm/W
Correlated color temperature (CCT)		5600		K
Color coordinates (CIEx, CIEy)		(0.333, 0.350)		-
Color consistency			5	SDCM
CRI	90	92		
R9	55			
Photometric code		956/579		
Radiation angle		27		deg
Peak intensity		1259		cd
Photobiological safety			RG1 unlimited	



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



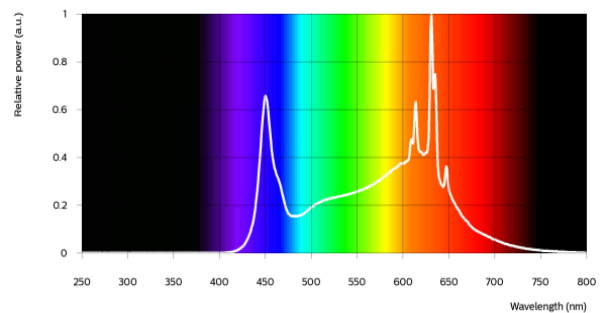
InteGrade engine UB Vi 855mm WWR G4

Parameter	Min	Typ	Max	Unit
Luminous flux	968	1046	1255	lm
Flux within 120° cone		900		lm
Efficacy		107		lm/W
Color coordinates (CIEx, CIEy)		(0.384, 0.326)		-
Color consistency			3	SDCM
R9	-50			
Radiation angle		27		deg
Peak intensity		778		cd
Photobiological safety			RG1 unlimited	

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

Color rendering according to IES TM-30 is 90.

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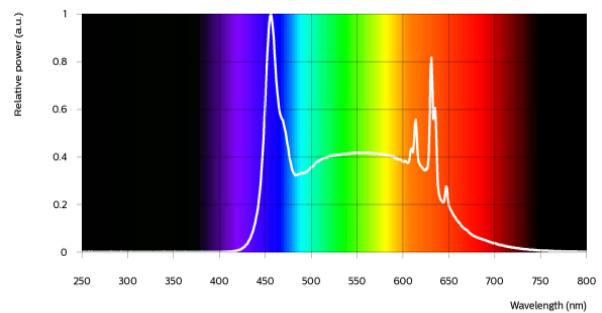


InteGrade engine UB Vi 1150mm 956 G4

Parameter	Min	Typ	Max	Unit
Luminous flux	2114	2285	2742	lm
Flux within 120° cone		1965		lm
Efficacy		119		lm/W
Correlated color temperature (CCT)		5600		K
Color coordinates (CIEx, CIEy)		(0.333, 0.350)		-
Color consistency			5	SDCM
CRI	90	92		
R9	55			
Photometric code		956/579		
Radiation angle		27		deg
Peak intensity		1700		cd
Photobiological safety			RG1 unlimited	



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



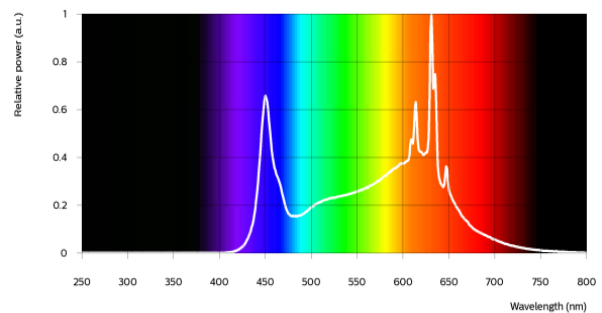
InteGrade engine UB Vi 1150mm WWR G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1296	1401	1682	lm
Flux within 120° cone		1205		lm
Efficacy		107		lm/W
Color coordinates (CIEx, CIEy)		(0.384, 0.326)		-
Color consistency			3	SDCM
R9	-50			
Radiation angle		27		deg
Peak intensity		1042		cd
Photobiological safety			RG1 unlimited	

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

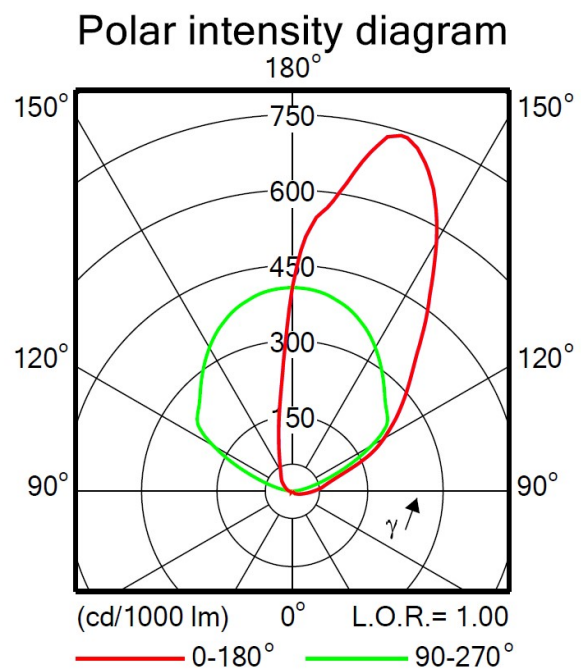
Color rendering according to IES TM-30 is 90.

WWR products are special purpose products. They are not intended for in-house use.



Beam shape

Light distribution, scaled to cd per 1000lm



Electrical characteristics

InteGrade engine UB Vi 140mm WWR G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		1.6		W = kWh/1000h
Number of modules per chain			12	

InteGrade engine UB Vi 575mm WWR G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		6.6		W = kWh/1000h
Number of modules per chain			3	

InteGrade engine UB Vi 760mm 956 G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		12.7		W = kWh/1000h
Number of modules per chain			3	

InteGrade engine UB Vi 760mm WWR G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		8.6		W = kWh/1000h
Number of modules per chain			3	

InteGrade engine UB Vi 855mm 956 G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		14.3		W = kWh/1000h
Number of modules per chain			3	

InteGrade engine UB Vi 855mm WWR G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		9.8		W = kWh/1000h
Number of modules per chain			3	

InteGrade engine UB Vi 1150mm 956 G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		19.3		W = kWh/1000h
Number of modules per chain			3	

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		13.1		W = kWh/1000h
Number of modules per chain			3	

Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80		
		B50	B20	B10	B50	B20	B10
	Ta -20°C	>100	>100	>100	>100	>100	>100
	Ta 5°C	>100	>100	>100	>100	>100	>100
	Ta 30°C	>100	>100	>100	>100	>100	>100

Lifetime

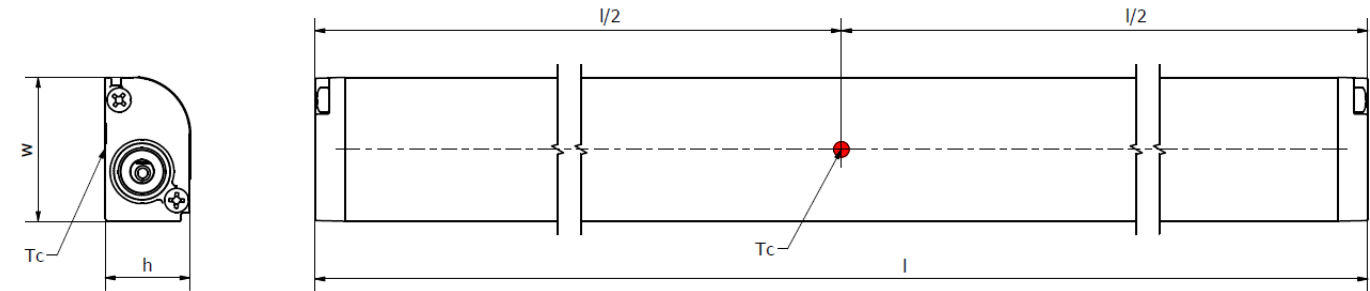
Parameter	Value	Unit
M70F50 nominal	100000	hours
M70F50 life	100000	hours

Mechanical characteristics

InteGrade engine UB Vi 140mm WWR G4

Parameter	Min	Typ	Max	Unit
Length	136	140	144	mm
Width	19.3	19.7	20.1	mm
Height total	12.4	12.9	13.4	mm
Product mass		30		gram

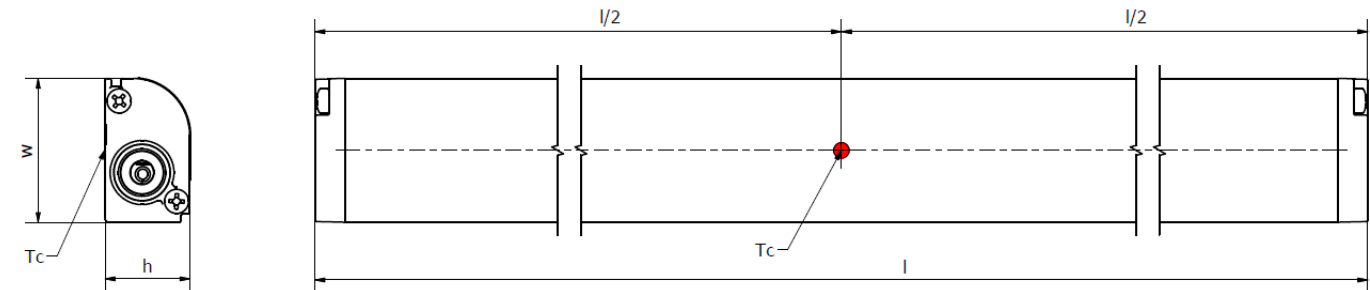
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine UB Vi 575mm WWR G4

Parameter	Min	Typ	Max	Unit
Length	571	575	579	mm
Width	19.3	19.7	20.1	mm
Height total	12.4	12.9	13.4	mm
Product mass		120		gram

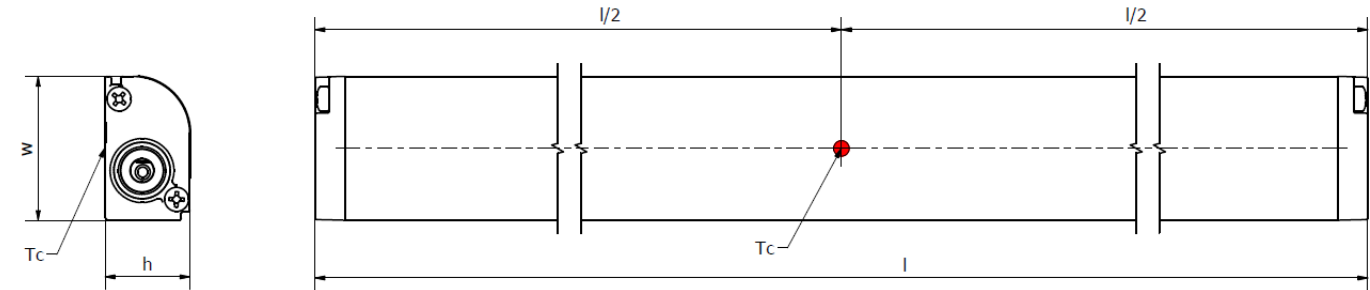
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine UB Vi 760mm 956 G4
InteGrade engine UB Vi 760mm WWR G4

Parameter	Min	Typ	Max	Unit
Length	756	760	764	mm
Width	19.3	19.7	20.1	mm
Height total	12.4	12.9	13.4	mm
Product mass		172		gram

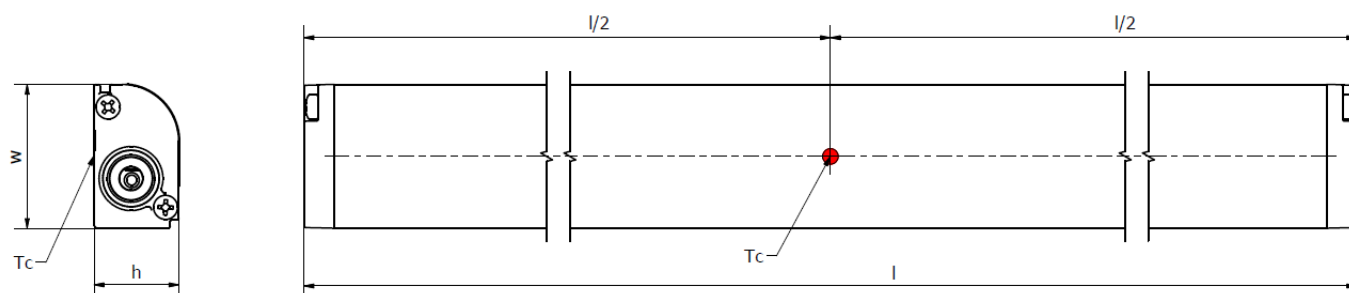
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine UB Vi 855mm 956 G4
InteGrade engine UB Vi 855mm WWR G4

Parameter	Min	Typ	Max	Unit
Length	851	855	859	mm
Width	19.3	19.7	20.1	mm
Height total	12.4	12.9	13.4	mm
Product mass		180		gram

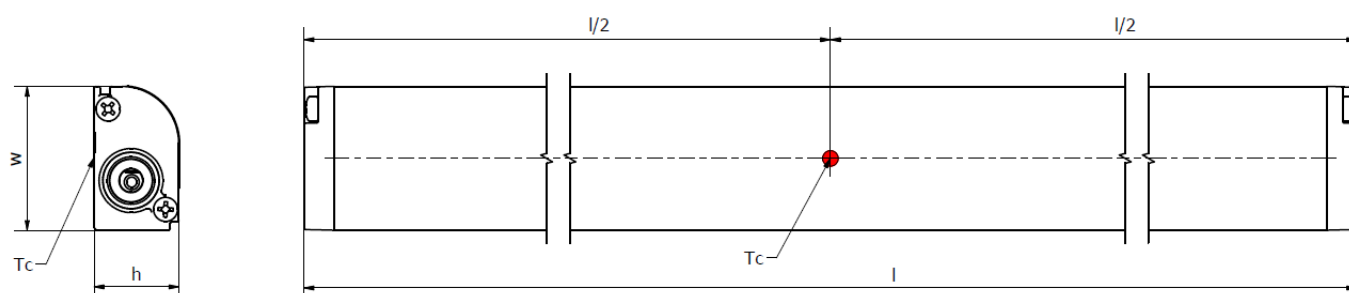
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine UB Vi 1150mm 956 G4
InteGrade engine UB Vi 1150mm WWR G4

Parameter	Min	Typ	Max	Unit
Length	1146	1150	1154	mm
Width	19.3	19.7	20.1	mm
Height total	12.4	12.9	13.4	mm
Product mass		230		gram

Thermal expansion from -30°C to +30°C is included in the tolerances



Absolute ratings

Parameter	Min	Max	Unit
Case temperature (Tc-max)		70	°C
Ambient temperature	-30	50	°C

Application information

Certificates and Standards

IEC/EN 62031
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.250.0-08
UL 2108
NSF

Application

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

Do not use in highly polluted areas. Surface mounting only.



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30/01/2024