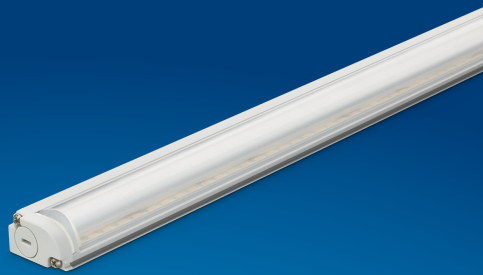


PHILIPS

InteGrade

LED

InteGrade engine UB
vision PW G4



Datasheet

Key features and benefits

- Miniaturized slim design for aesthetic integration
- Premium color consistency up to 3SDCM over lifetime
- Natural merchandise color with specially formulated LEDs up to CRI95
- State of the Art LED diode delivering up to 190 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
- Unique Premium White light for brightest whites and outstanding merchandize attractiveness
- Maximum design flexibility with extensive range of engine lengths
- Color temperatures (3000 PW, 4000 PW)
- 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

September 2021



Ordering data

Commercial product name	EOC	12NC	Box quantity
InteGrade engine UB Vi 140mm 930 PW G4	8718699 744458 00	9290 021 60106	24
InteGrade engine UB Vi 140mm 940 PW G4	8718699 744472 00	9290 021 60206	24
InteGrade engine UB Vi 575mm 930 PW G4	8718699 744496 00	9290 021 60306	24
InteGrade engine UB Vi 575mm 940 PW G4	8718699 744519 00	9290 021 60406	24
InteGrade engine UB Vi 760mm 930 PW G4	8718699 756956 00	9290 021 85606	24
InteGrade engine UB Vi 760mm 940 PW G4	8718699 756932 00	9290 021 85506	24
InteGrade engine UB Vi 855mm 930 PW G4	8718699 744533 00	9290 021 60506	24
InteGrade engine UB Vi 855mm 940 PW G4	8718699 744557 00	9290 021 60606	24
InteGrade engine UB Vi 1150mm 930 PW G4	8718699 744571 00	9290 021 60706	24
InteGrade engine UB Vi 1150mm 940 PW G4	8718699 744595 00	9290 021 60806	24

Key Specifications at Nominal conditions

Name	12NC	Power (W)	Luminous Flux (lm)	Useful Flux (lm)	CRI
InteGrade engine UB Vi 140mm 930 PW G4	9290 021 60106	2.38	252	217	94
InteGrade engine UB Vi 140mm 940 PW G4	9290 021 60206	2.39	282	243	94
InteGrade engine UB Vi 575mm 930 PW G4	9290 021 60306	9.50	1011	869	94
InteGrade engine UB Vi 575mm 940 PW G4	9290 021 60406	9.29	1102	948	94
InteGrade engine UB Vi 760mm 930 PW G4	9290 021 85606	12.4	1316	1132	94
InteGrade engine UB Vi 760mm 940 PW G4	9290 021 85506	12.2	1446	1244	94
InteGrade engine UB Vi 855mm 930 PW G4	9290 021 60506	14.3	1514	1302	94
InteGrade engine UB Vi 855mm 940 PW G4	9290 021 60606	14.1	1667	1434	94
InteGrade engine UB Vi 1150mm 930 PW G4	9290 021 60706	19.0	2021	1738	94
InteGrade engine UB Vi 1150mm 940 PW G4	9290 021 60806	18.6	2205	1896	94

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

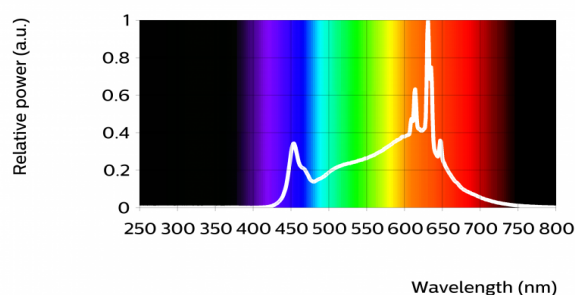
Optical characteristics - table per color (CCT)

InteGrade engine UB Vi 140mm 930 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	233	252	302	lm
Flux within 120° cone		217		lm
Module efficacy		106		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.419, 0.381)		-
Color consistency			3	SDCM
CRI	92	94		
R9	75			
Photometric code		930/359		
Radiation angle		27		deg
Peak intensity		187		cd
Photobiological safety			RG1 unlimited	



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

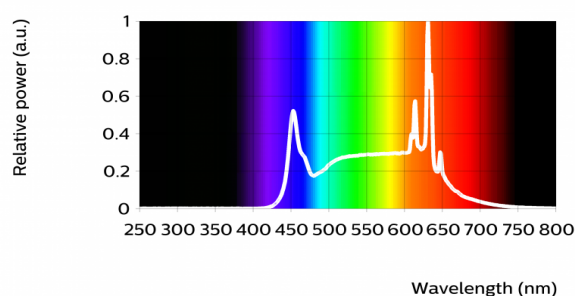


InteGrade engine UB Vi 140mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	261	282	339	lm
Flux within 120° cone		243		lm
Module efficacy		118		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.359)		-
Color consistency			3	SDCM
CRI	92	94		
R9	85			
Photometric code		940/359		
Radiation angle		27		deg
Peak intensity		210		cd
Photobiological safety			RG1 unlimited	



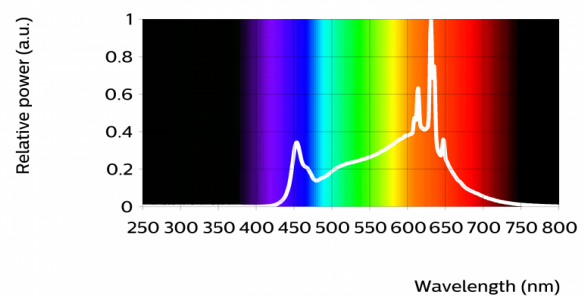
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine UB Vi 575mm 930 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	935	1011	1213	lm
Flux within 120° cone		869		lm
Module efficacy		106		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.419, 0.381)		-
Color consistency			3	SDCM
CRI	92	94		
R9	75			
Photometric code		930/359		
Radiation angle		27		deg
Peak intensity		752		cd
Photobiological safety			RG1 unlimited	

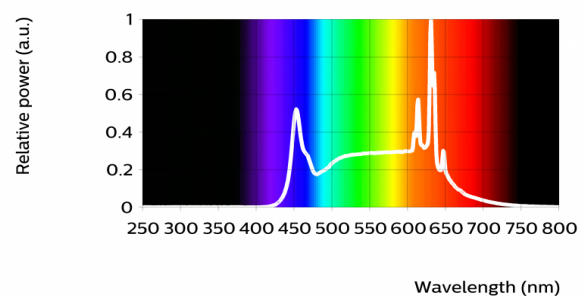
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine UB Vi 575mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1020	1102	1323	lm
Flux within 120° cone		948		lm
Module efficacy		119		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.359)		-
Color consistency			3	SDCM
CRI	92	94		
R9	85			
Photometric code		940/359		
Radiation angle		27		deg
Peak intensity		820		cd
Photobiological safety			RG1 unlimited	

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

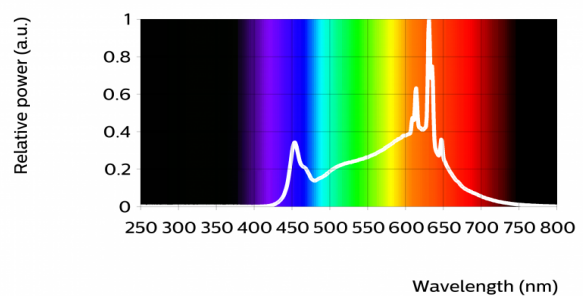


InteGrade engine UB Vi 760mm 930 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1217	1316	1579	lm
Flux within 120° cone		1132		lm
Module efficacy		106		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.419, 0.381)		-
Color consistency			3	SDCM
CRI	92	94		
R9	75			
Photometric code		930/359		
Radiation angle		27		deg
Peak intensity		979		cd
Photobiological safety			RG1 unlimited	



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

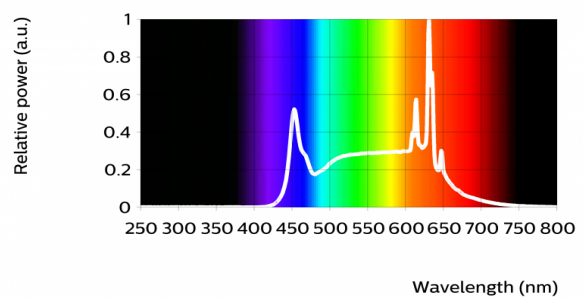


InteGrade engine UB Vi 760mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1338	1446	1736	lm
Flux within 120° cone		1244		lm
Module efficacy		119		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.359)		-
Color consistency			3	SDCM
CRI	92	94		
R9	85			
Photometric code		940/359		
Radiation angle		27		deg
Peak intensity		1076		cd
Photobiological safety			RG1 unlimited	



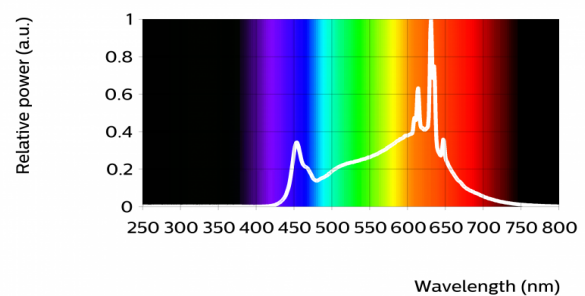
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine UB Vi 855mm 930 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1400	1514	1817	lm
Flux within 120° cone		1302		lm
Module efficacy		106		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.419, 0.381)		-
Color consistency			3	SDCM
CRI	92	94		
R9	75			
Photometric code		930/359		
Radiation angle		27		deg
Peak intensity		1126		cd
Photobiological safety			RG1 unlimited	

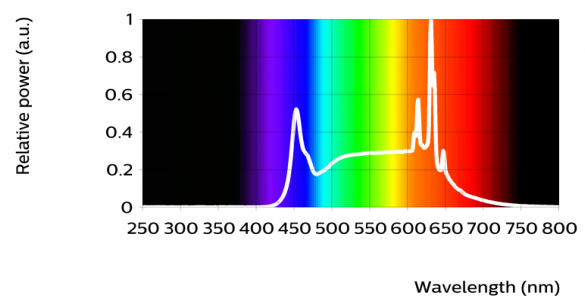
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine UB Vi 855mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1542	1667	2000	lm
Flux within 120° cone		1434		lm
Module efficacy		118		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.359)		-
Color consistency			3	SDCM
CRI	92	94		
R9	85			
Photometric code		940/359		
Radiation angle		27		deg
Peak intensity		1240		cd
Photobiological safety			RG1 unlimited	

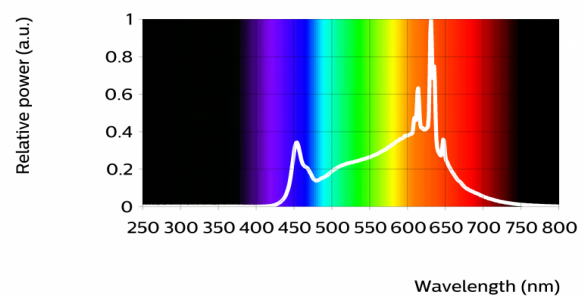
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine UB Vi 1150mm 930 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1870	2021	2425	lm
Flux within 120° cone		1738		lm
Module efficacy		106		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.419, 0.381)		-
Color consistency			3	SDCM
CRI	92	94		
R9	75			
Photometric code		930/359		
Radiation angle		27		deg
Peak intensity		1503		cd
Photobiological safety			RG1 unlimited	

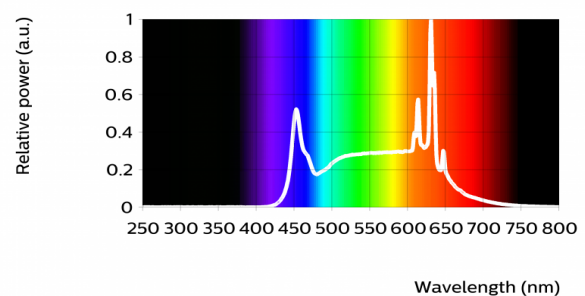
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine UB Vi 1150mm 940 PW G4

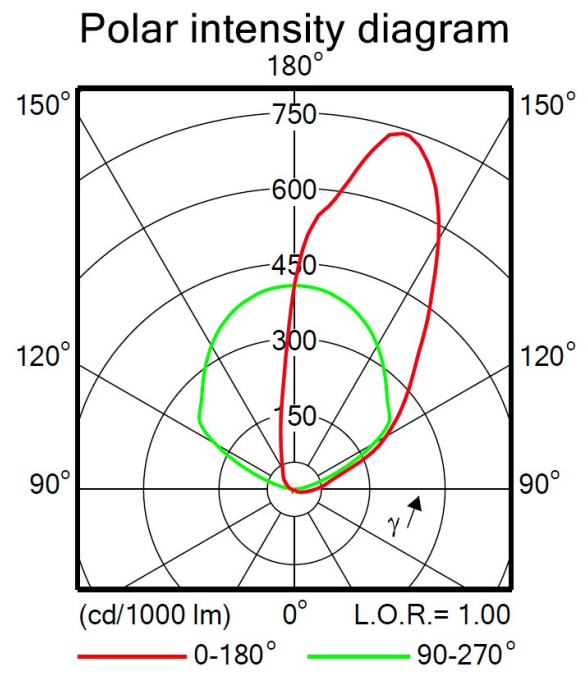
Parameter	Min	Typ	Max	Unit
Luminous flux	2039	2205	2646	lm
Flux within 120° cone		1896		lm
Module efficacy		119		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.359)		-
Color consistency			3	SDCM
CRI	92	94		
R9	85			
Photometric code		940/359		
Radiation angle		27		deg
Peak intensity		1640		cd
Photobiological safety			RG1 unlimited	

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



Beam shape

Light distribution, scaled to cd per 1000lm



Electrical characteristics

InteGrade engine UB Vi 140mm 930 PW G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		2.38		W = kWh/1000h
Number of modules per chain			12	

InteGrade engine UB Vi 140mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		2.39		W = kWh/1000h
Number of modules per chain			12	

InteGrade engine UB Vi 575mm 930 PW G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		9.50		W = kWh/1000h
Number of modules per chain			3	

InteGrade engine UB Vi 575mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		9.29		W = kWh/1000h
Number of modules per chain			3	

InteGrade engine UB Vi 760mm 930 PW G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		12.4		W = kWh/1000h
Number of modules per chain			3	

InteGrade engine UB Vi 760mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		12.2		W = kWh/1000h
Number of modules per chain			3	

InteGrade engine UB Vi 855mm 930 PW 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 940 PW G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		14.1		W = kWh/1000h
Number of modules per chain			3	

InteGrade engine UB Vi 1150mm 930 PW G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		19.0		W = kWh/1000h
Number of modules per chain			3	

InteGrade engine UB Vi 1150mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		18.6		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

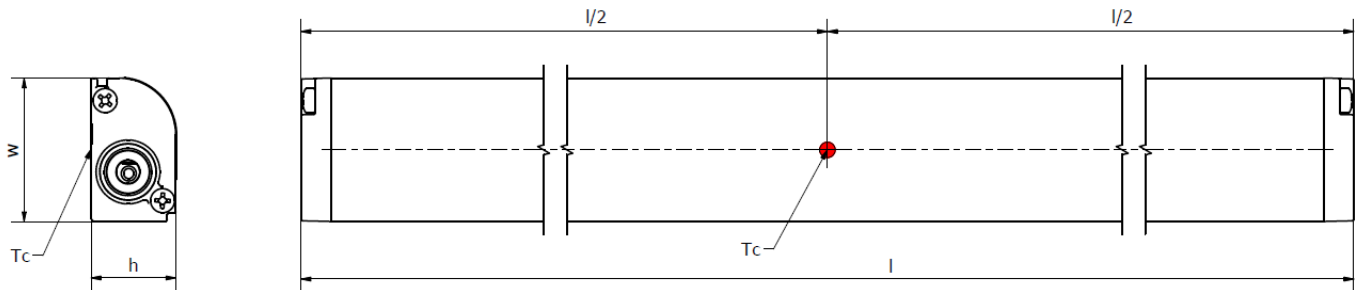
Mechanical characteristics

InteGrade engine UB Vi 140mm 930 PW G4

InteGrade engine UB Vi 140mm 940 PW 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

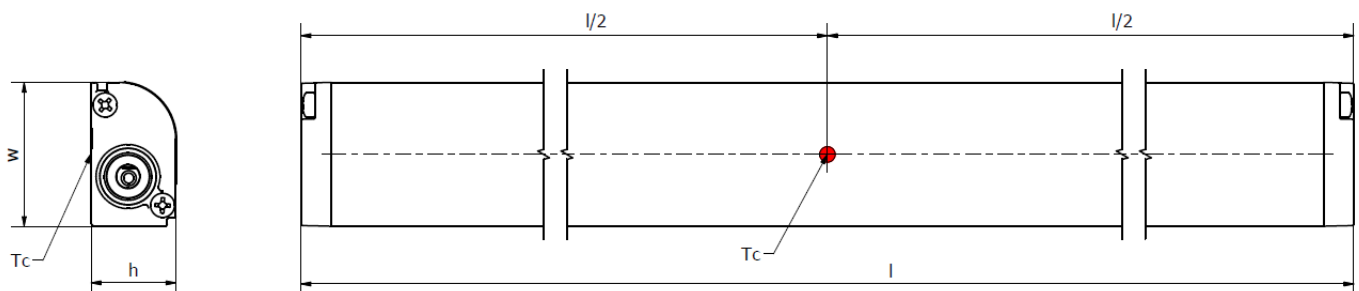


InteGrade engine UB Vi 575mm 930 PW G4

InteGrade engine UB Vi 575mm 940 PW 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

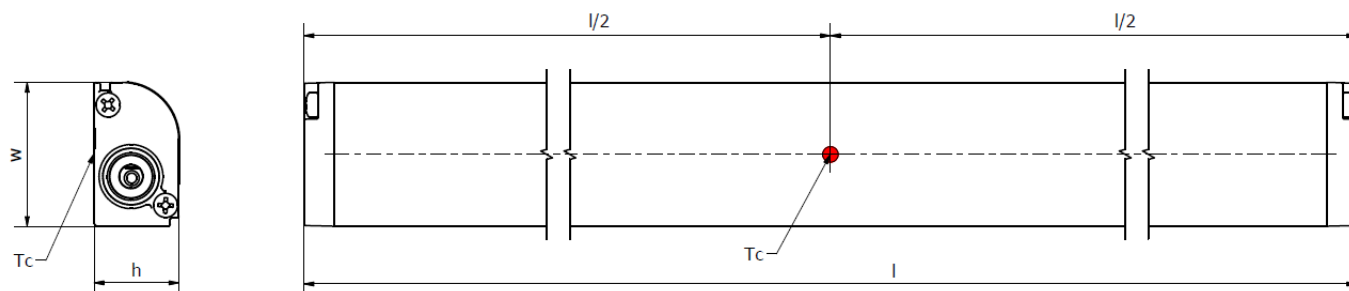


InteGrade engine UB Vi 760mm 930 PW G4

InteGrade engine UB Vi 760mm 940 PW 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

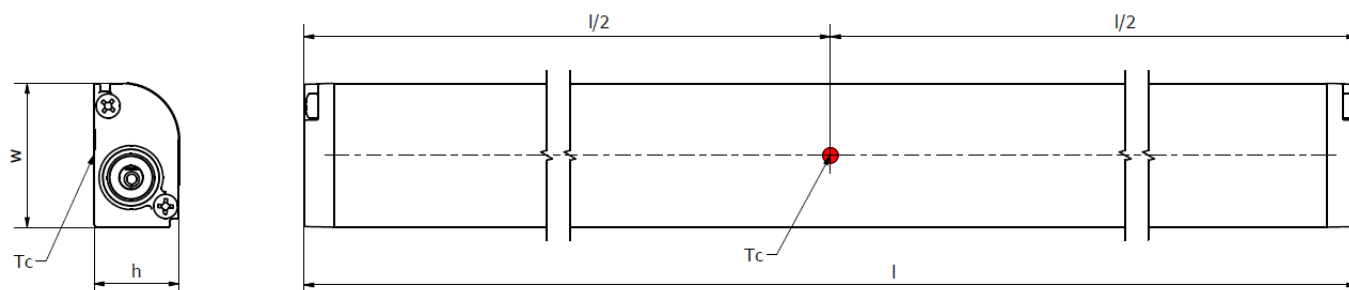


InteGrade engine UB Vi 855mm 930 PW G4

InteGrade engine UB Vi 855mm 940 PW 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

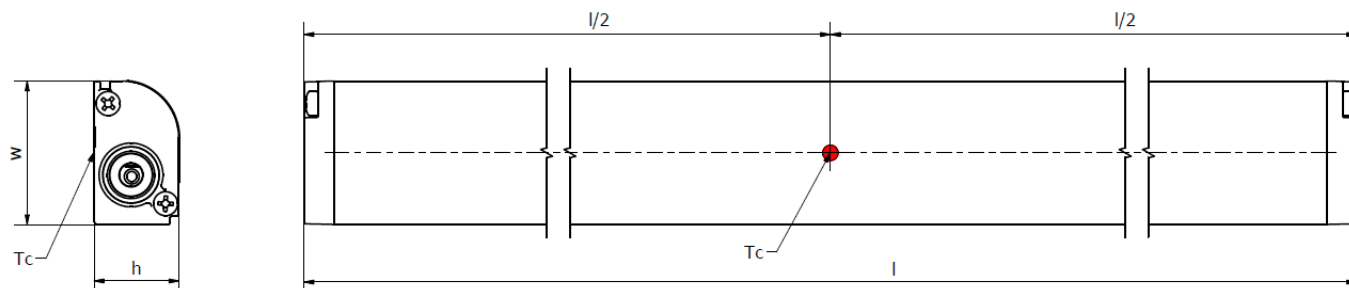


InteGrade engine UB Vi 1150mm 930 PW G4

InteGrade engine UB Vi 1150mm 940 PW 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 (T _c -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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13/09/2021