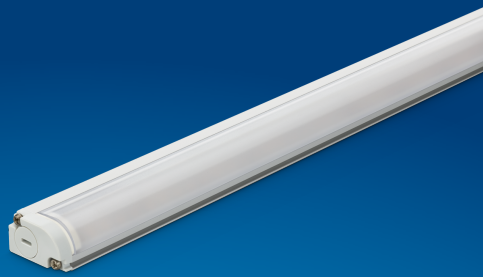


PHILIPS

InteGrade

LED

InteGrade engine value
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 128 lm/w meeting SLR (Single Lighting Regulation)
- Maximum design flexibility with extensive range of engine lengths
- Color temperatures (5600 K & 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 Va 140mm 956 G4	8718699 742003 00	9290 021 48106	24
InteGrade engine Va 140mm WWR G4	8718699 741921 00	9290 021 47706	24
InteGrade engine Va 575mm 956 G4	8718699 742027 00	9290 021 48206	24
InteGrade engine Va 575mm WWR G4	8718699 741945 00	9290 021 47806	24
InteGrade engine Va 760mm 956 G4	8718699 756833 00	9290 021 85006	24
InteGrade engine Va 760mm WWR G4	8718699 756857 00	9290 021 85106	24
InteGrade engine Va 855mm 956 G4	8718699 742041 00	9290 021 48306	24
InteGrade engine Va 855mm WWR G4	8718699 741969 00	9290 021 47906	24
InteGrade engine Va 1150mm 956 G4	8718699 742065 00	9290 021 48406	24
InteGrade engine Va 1150mm WWR G4	8718699 741983 00	9290 021 48006	24

Key Specifications at Nominal conditions

Name	12NC	Power (W)	Luminous Flux (lm)	Useful Flux (lm)	CRI
InteGrade engine Va 140mm 956 G4	9290 021 48106	0.88	109	109	90
InteGrade engine Va 140mm WWR G4	9290 021 47706	0.65	70	70	
InteGrade engine Va 575mm 956 G4	9290 021 48206	3.36	431	431	90
InteGrade engine Va 575mm WWR G4	9290 021 47806	2.73	309	309	
InteGrade engine Va 760mm 956 G4	9290 021 85006	4.48	574	574	90
InteGrade engine Va 760mm WWR G4	9290 021 85106	3.58	406	406	
InteGrade engine Va 855mm 956 G4	9290 021 48306	5.12	648	648	90
InteGrade engine Va 855mm WWR G4	9290 021 47906	4.03	449	449	
InteGrade engine Va 1150mm 956 G4	9290 021 48406	6.72	862	862	90
InteGrade engine Va 1150mm WWR G4	9290 021 48006	5.46	618	618	

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T _a (ambient temperature)	5	30	50	°C

* Nominal value at which typical performance is specified

** Value at which life time is specified

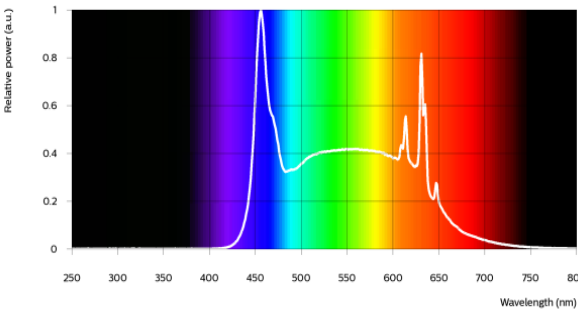
*** Maximum value for safe operation, do not operate above this value

Optical characteristics - table per color (CCT)

InteGrade engine Va 140mm 956 G4

Parameter	Min	Typ	Max	Unit
Luminous flux	100	109	130	lm
Efficacy		124		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		
Peak intensity		49		cd
Photobiological safety			RG1 unlimited	

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



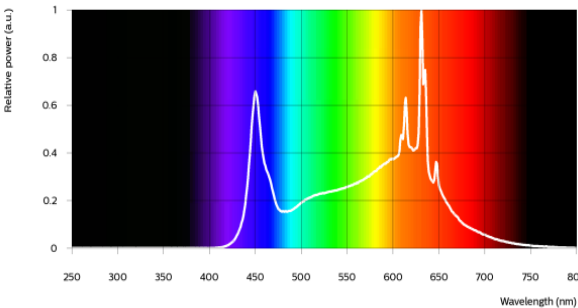
InteGrade engine Va 140mm WWR G4

Parameter	Min	Typ	Max	Unit
Luminous flux	65	70	84	lm
Efficacy		108		lm/W
Color coordinates (CIEx, CIEy)		(0.384, 0.326)		-
Color consistency			3	SDCM
R9	-50			
Peak intensity		32		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.

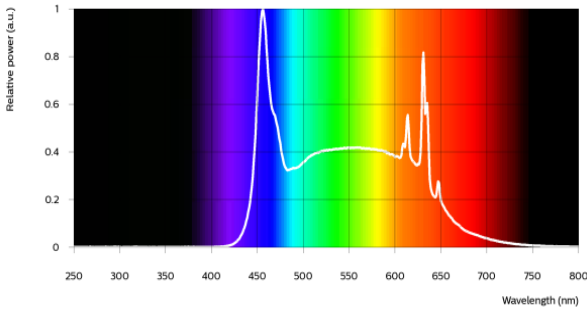
WWR products are special purpose products. They are not intended for in-house use.



InteGrade engine Va 575mm 956 G4

Parameter	Min	Typ	Max	Unit
Luminous flux	398	431	517	lm
Efficacy		128		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		
Peak intensity		194		cd
Photobiological safety			RG1 unlimited	

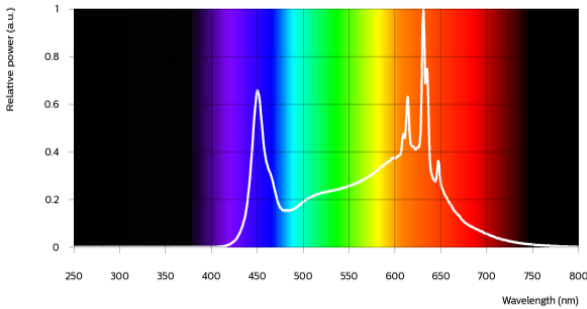
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine Va 575mm WWR G4

Parameter	Min	Typ	Max	Unit
Luminous flux	286	309	371	lm
Efficacy		113		lm/W
Color coordinates (CIEx, CIEy)		(0.384, 0.326)		-
Color consistency			3	SDCM
R9	-50			
Peak intensity		139		cd
Photobiological safety			RG1 unlimited	

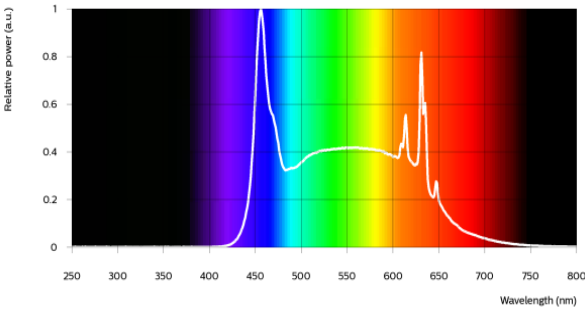
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5.
Color rendering according to IES TM-30 is 90.
WWR products are special purpose products. They are not intended for in-house use.



InteGrade engine Va 760mm 956 G4

Parameter	Min	Typ	Max	Unit
Luminous flux	531	574	689	lm
Efficacy		128		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		
Peak intensity		259		cd
Photobiological safety			RG1 unlimited	

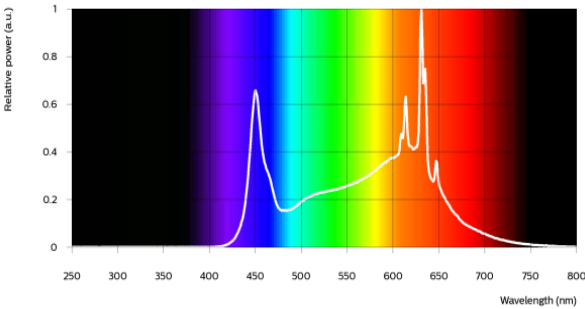
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine Va 760mm WWR G4

Parameter	Min	Typ	Max	Unit
Luminous flux	376	406	487	lm
Efficacy		113		lm/W
Color coordinates (CIEx, CIEy)		(0.384, 0.326)		-
Color consistency			3	SDCM
R9	-50			
Peak intensity		183		cd
Photobiological safety			RG1 unlimited	

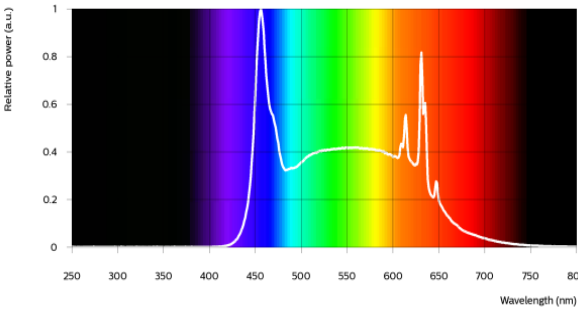
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5.
Color rendering according to IES TM-30 is 90.
WWR products are special purpose products. They are not intended for in-house use.



InteGrade engine Va 855mm 956 G4

Parameter	Min	Typ	Max	Unit
Luminous flux	599	648	777	lm
Efficacy		127		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		
Peak intensity		292		cd
Photobiological safety			RG1 unlimited	

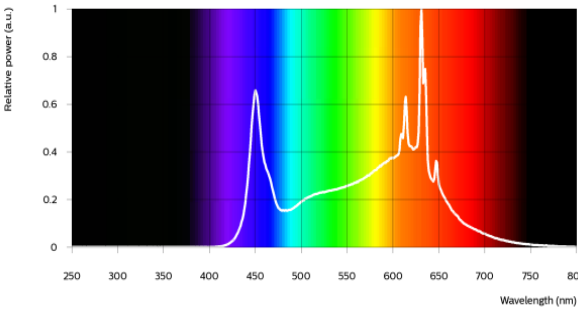
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine Va 855mm WWR G4

Parameter	Min	Typ	Max	Unit
Luminous flux	416	449	539	lm
Efficacy		111		lm/W
Color coordinates (CIEx, CIEy)		(0.384, 0.326)		-
Color consistency			3	SDCM
R9	-50			
Peak intensity		202		cd
Photobiological safety			RG1 unlimited	

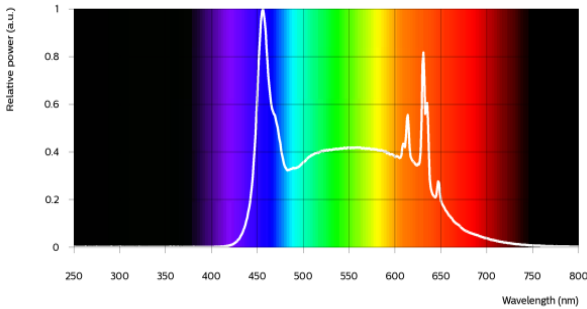
Measurement precision for flux +/- 5%. Measurement precision for x, y +/- 0.005. Measurement precision for CRI 1.5.
Color rendering according to IES TM-30 is 90.
WWR products are special purpose products. They are not intended for in-house use.



InteGrade engine Va 1150mm 956 G4

Parameter	Min	Typ	Max	Unit
Luminous flux	797	862	1034	lm
Efficacy		128		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		
Peak intensity		389		cd
Photobiological safety			RG1 unlimited	

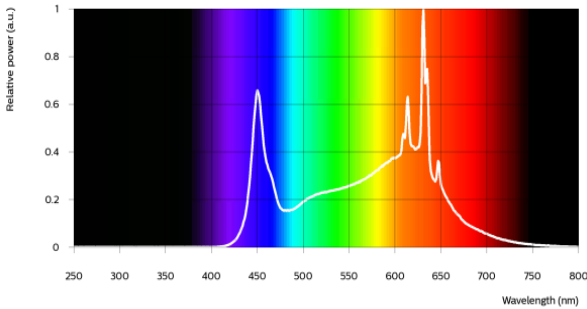
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine Va 1150mm WWR G4

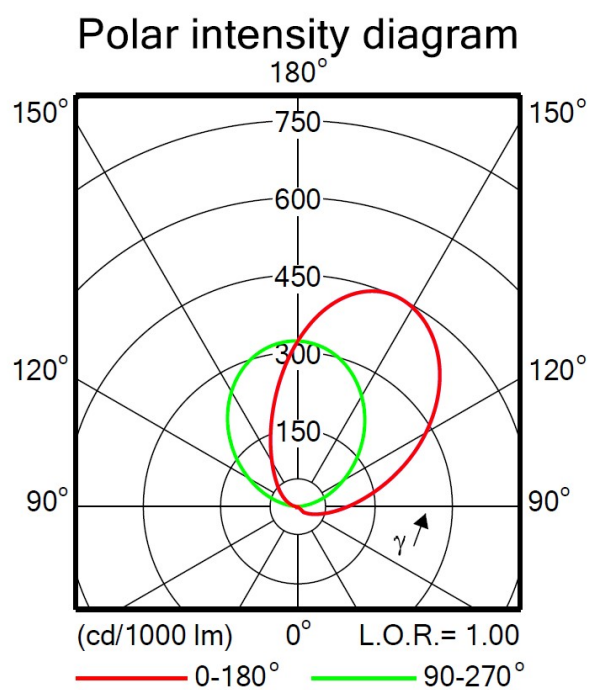
Parameter	Min	Typ	Max	Unit
Luminous flux	572	618	742	lm
Efficacy		113		lm/W
Color coordinates (CIEx, CIEy)		(0.384, 0.326)		-
Color consistency			3	SDCM
R9	-50			
Peak intensity		279		cd
Photobiological safety			RG1 unlimited	

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 Va 140mm 956 G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		0.9		W = kWh/1000h
Number of modules per chain			50	

InteGrade engine Va 140mm WWR G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		0.6		W = kWh/1000h
Number of modules per chain			50	

InteGrade engine Va 575mm 956 G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		3.4		W = kWh/1000h
Number of modules per chain			12	

InteGrade engine Va 575mm WWR G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		2.7		W = kWh/1000h
Number of modules per chain			12	

InteGrade engine Va 760mm 956 G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		4.5		W = kWh/1000h
Number of modules per chain			9	

InteGrade engine Va 760mm WWR G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		3.6		W = kWh/1000h
Number of modules per chain			9	

InteGrade engine Va 855mm 956 G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		5.1		W = kWh/1000h
Number of modules per chain			8	

InteGrade engine Va 855mm WWR G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		4.0		W = kWh/1000h
Number of modules per chain			8	

InteGrade engine Va 1150mm 956 G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		6.7		W = kWh/1000h
Number of modules per chain			6	

InteGrade engine Va 1150mm WWR G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		5.5		W = kWh/1000h
Number of modules per chain			6	

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

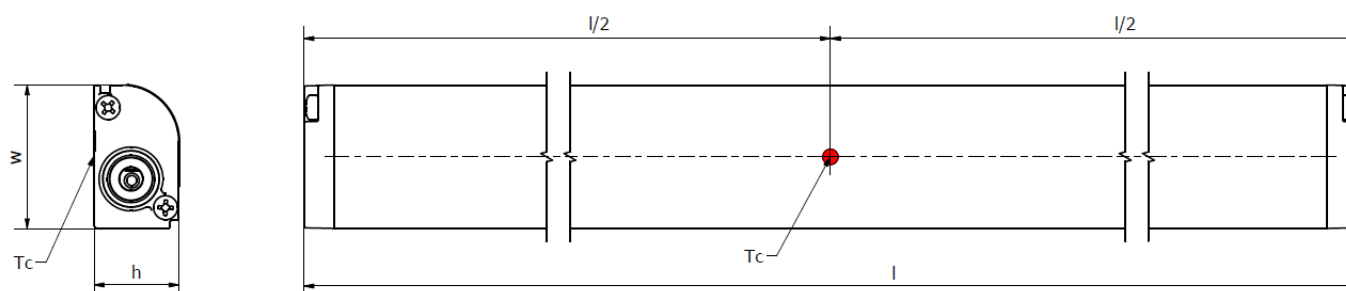
Parameter	Value	Unit
M70F50 nominal	100000	hours
M70F50 life	100000	hours

Mechanical characteristics

InteGrade engine Va 140mm 956 G4
InteGrade engine Va 140mm WWR G4

Parameter	Min	Typ	Max	Unit
Length	136	140	144	mm
Width	18.2	18.5	18.7	mm
Height total	10.5	11	11.5	mm
Product mass		30		gram

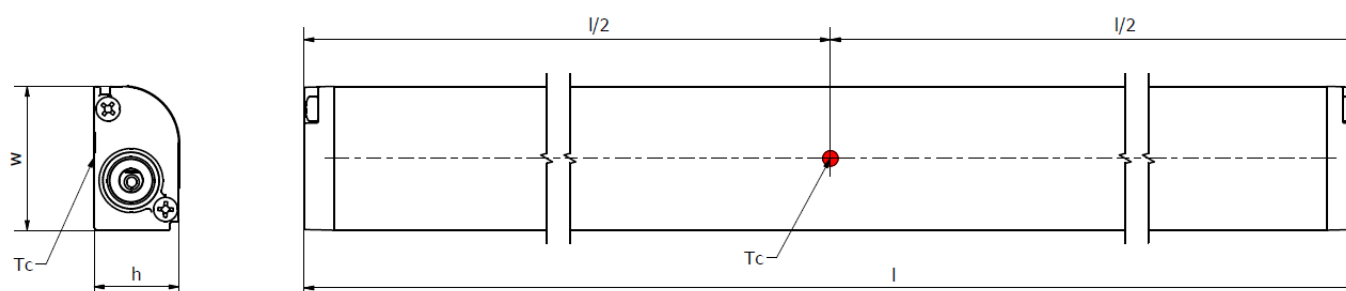
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine Va 575mm 956 G4
InteGrade engine Va 575mm WWR G4

Parameter	Min	Typ	Max	Unit
Length	571	575	579	mm
Width	18.2	18.5	18.7	mm
Height total	10.5	11	11.5	mm
Product mass		120		gram

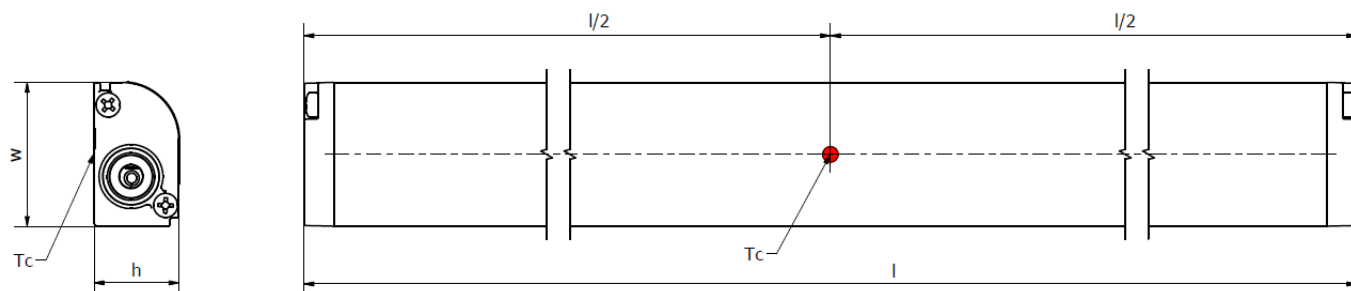
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine Va 760mm 956 G4
InteGrade engine Va 760mm WWR G4

Parameter	Min	Typ	Max	Unit
Length	756	760	764	mm
Width	18.2	18.5	18.7	mm
Height total	10.5	11	11.5	mm
Product mass		172		gram

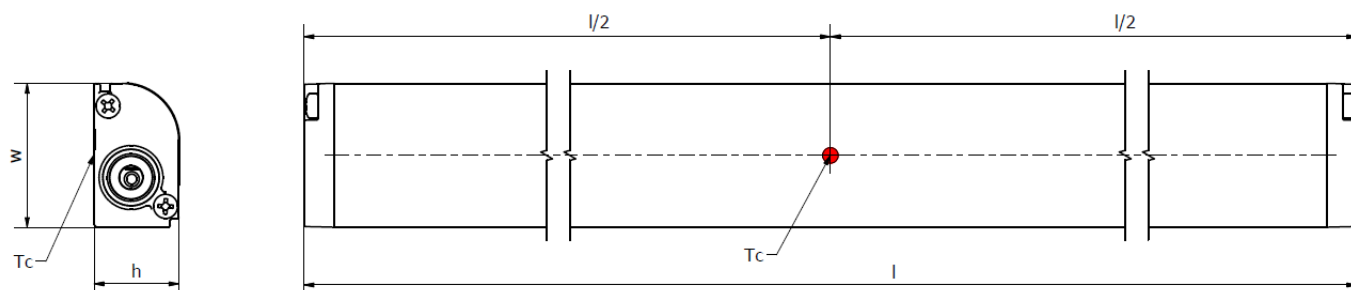
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine Va 855mm 956 G4
InteGrade engine Va 855mm WWR G4

Parameter	Min	Typ	Max	Unit
Length	851	855	859	mm
Width	18.2	18.5	18.7	mm
Height total	10.5	11	11.5	mm
Product mass		180		gram

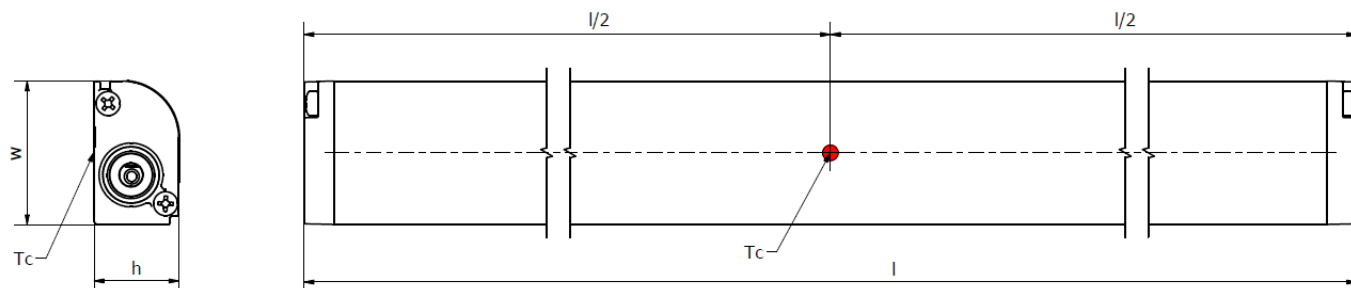
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine Va 1150mm 956 G4
InteGrade engine Va 1150mm WWR G4

Parameter	Min	Typ	Max	Unit
Length	1146	1150	1154	mm
Width	18.2	18.5	18.7	mm
Height total	10.5	11	11.5	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

Environmental

RoHS/REACH

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