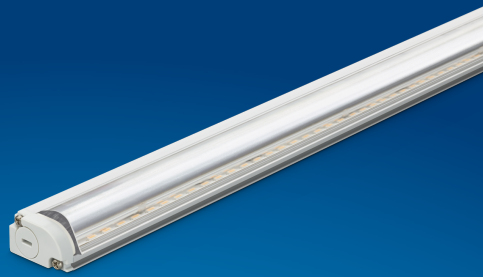


PHILIPS

InteGrade

LED

InteGrade engine NB
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 107 lm/w meeting SLR (Single Lighting Regulation)
- Unique Premium White light for brightest whites and outstanding merchandise attractiveness
- Maximum design flexibility with extensive range of engine lengths
- Color temperatures (3000 PW, 4000 PW)
- Breakthrough optical design for excellent uniformity and best merchandise presentation
- 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 NB Vi 140mm 930 PW G4	8718699 744656 00	9290 021 61106	24
InteGrade engine NB Vi 140mm 940 PW G4	8718699 744670 00	9290 021 61206	24
InteGrade engine NB Vi 575mm 930 PW G4	8718699 744694 00	9290 021 61506	24
InteGrade engine NB Vi 575mm 940 PW G4	8718699 744717 00	9290 021 61606	24
InteGrade engine NB Vi 760mm 940 PW G4	8719514 356412 00	9290 028 76406	24
InteGrade engine NB Vi 855mm 940 PW G4	8719514 356436 00	9290 028 76506	24
InteGrade engine NB Vi 1150mm 930 PW G4	8718699 744731 00	9290 021 61706	24
InteGrade engine NB Vi 1150mm 940 PW G4	8718699 744755 00	9290 021 61806	24
InteGrade engine NB Vi 1430mm 930 PW G4	8718699 745158 00	9290 021 61306	24
InteGrade engine NB Vi 1430mm 940 PW G4	8718699 745172 00	9290 021 61406	24
InteGrade engine NB Vi 1570mm 930 PW G4	8718699 745196 00	9290 021 61906	12
InteGrade engine NB Vi 1570mm 940 PW G4	8718699 745219 00	9290 021 62006	12

Key Specifications at Nominal conditions

Name	12NC	Power (W)	Luminous Flux (lm)	Useful Flux (lm)	CRI
InteGrade engine NB Vi 140mm 930 PW G4	9290 021 61106	2.69	262	241	93
InteGrade engine NB Vi 140mm 940 PW G4	9290 021 61206	2.69	285	262	93
InteGrade engine NB Vi 575mm 930 PW G4	9290 021 61506	11.0	1076	990	93
InteGrade engine NB Vi 575mm 940 PW G4	9290 021 61606	11.0	1169	1075	93
InteGrade engine NB Vi 760mm 940 PW G4	9290 028 76406	14.5	1549	1425	93
InteGrade engine NB Vi 855mm 940 PW G4	9290 028 76506	16.3	1739	1600	93
InteGrade engine NB Vi 1150mm 930 PW G4	9290 021 61706	21.9	2151	1979	93
InteGrade engine NB Vi 1150mm 940 PW G4	9290 021 61806	21.9	2338	2151	93
InteGrade engine NB Vi 1430mm 930 PW G4	9290 021 61306	27.3	2676	2462	93
InteGrade engine NB Vi 1430mm 940 PW G4	9290 021 61406	27.3	2908	2675	93
InteGrade engine NB Vi 1570mm 930 PW G4	9290 021 61906	30.0	2938	2703	93
InteGrade engine NB Vi 1570mm 940 PW G4	9290 021 62006	30.0	3193	2938	93

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

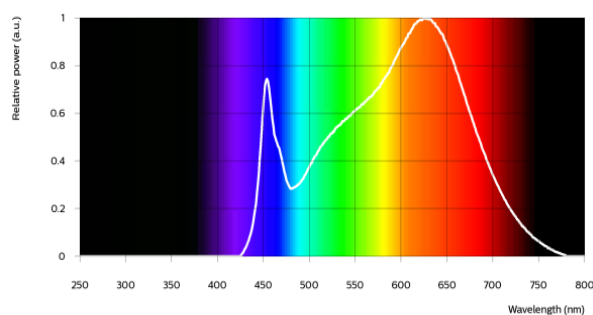
*** Maximum value for safe operation, do not operate above this value

Optical characteristics - table per color (CCT)

InteGrade engine NB Vi 140mm 930 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	243	262	315	lm
Flux within 120° cone		241		lm
Efficacy		97		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.419, 0.381)		-
Color consistency			3	SDCM
CRI	93	95		
R9	75			
Photometric code		930/359		
Radiation angle		26		deg
Peak intensity		282		cd
Photobiological safety			RG1 unlimited	

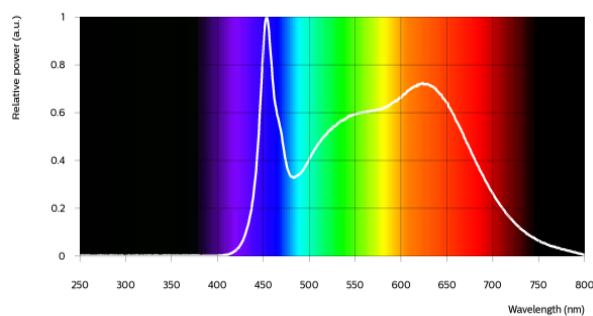
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Vi 140mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	264	285	342	lm
Flux within 120° cone		262		lm
Efficacy		106		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.359)		-
Color consistency			3	SDCM
CRI	93	95		
R9	85			
Photometric code		940/359		
Radiation angle		26		deg
Peak intensity		307		cd
Photobiological safety			RG1 unlimited	

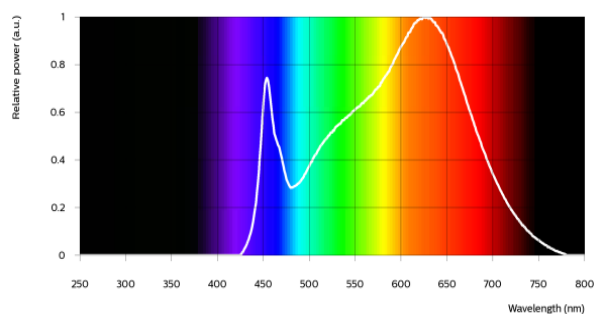
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Vi 575mm 930 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	995	1076	1291	lm
Flux within 120° cone		990		lm
Efficacy		98		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.419, 0.381)		-
Color consistency			3	SDCM
CRI	93	95		
R9	75			
Photometric code		930/359		
Radiation angle		26		deg
Peak intensity		1159		cd
Photobiological safety			RG1 unlimited	

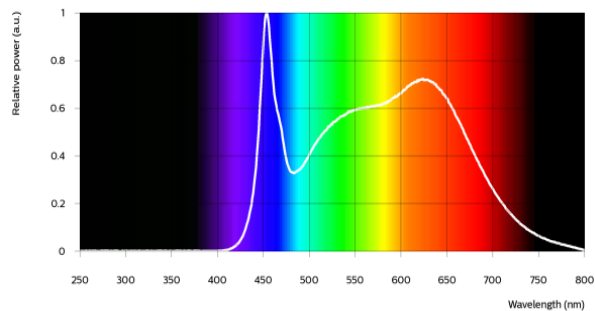
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Vi 575mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1081	1169	1403	lm
Flux within 120° cone		1075		lm
Efficacy		107		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.359)		-
Color consistency			3	SDCM
CRI	93	95		
R9	85			
Photometric code		940/359		
Radiation angle		26		deg
Peak intensity		1259		cd
Photobiological safety			RG1 unlimited	

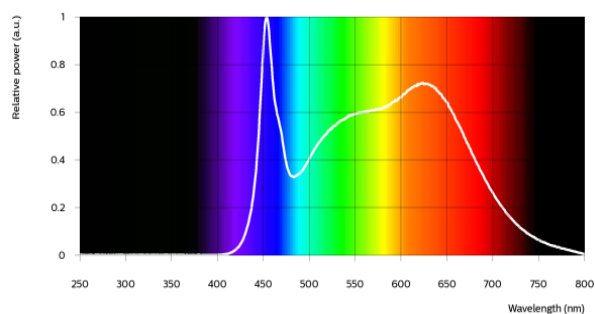
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Vi 760mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1433	1549	1859	lm
Flux within 120° cone		1425		lm
Efficacy		107		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.359)		-
Color consistency			3	SDCM
CRI	93	95		
R9	85			
Photometric code		940/359		
Radiation angle		26		deg
Peak intensity		1668		cd
Photobiological safety			RG1 unlimited	

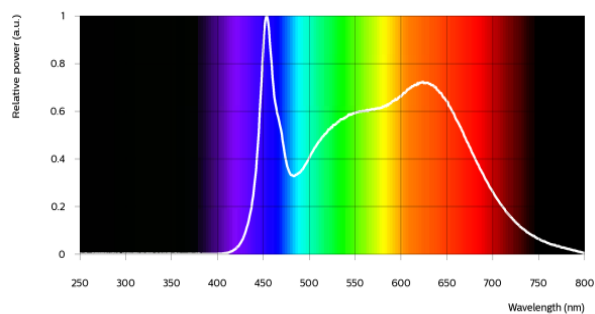
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Vi 855mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1609	1739	2087	lm
Flux within 120° cone		1600		lm
Efficacy		106		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.359)		-
Color consistency			3	SDCM
CRI	93	95		
R9	85			
Photometric code		940/359		
Radiation angle		26		deg
Peak intensity		1873		cd
Photobiological safety			RG1 unlimited	

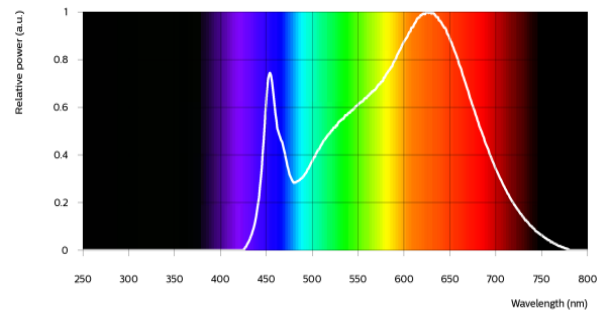
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Vi 1150mm 930 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1990	2151	2581	lm
Flux within 120° cone		1979		lm
Efficacy		98		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.419, 0.381)		-
Color consistency			3	SDCM
CRI	93	95		
R9	75			
Photometric code		930/359		
Radiation angle		26		deg
Peak intensity		2317		cd
Photobiological safety			RG1 unlimited	

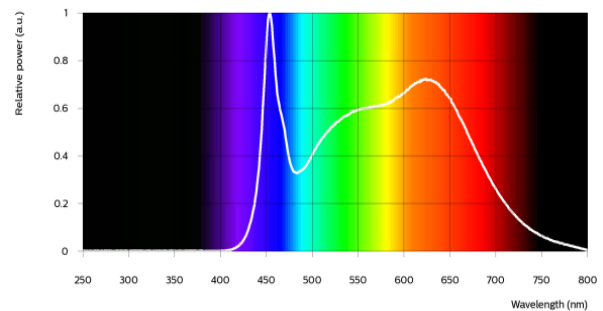
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Vi 1150mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	2163	2338	2806	lm
Flux within 120° cone		2151		lm
Efficacy		107		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.359)		-
Color consistency			3	SDCM
CRI	93	95		
R9	85			
Photometric code		940/359		
Radiation angle		26		deg
Peak intensity		2518		cd
Photobiological safety			RG1 unlimited	

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

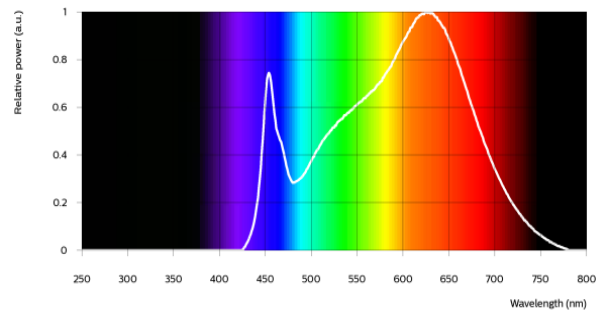


InteGrade engine NB Vi 1430mm 930 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	2475	2676	3211	lm
Flux within 120° cone		2462		lm
Efficacy		98		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.419, 0.381)		-
Color consistency			3	SDCM
CRI	93	95		
R9	75			
Photometric code		930/359		
Radiation angle		26		deg
Peak intensity		2882		cd
Photobiological safety			RG1 unlimited	



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

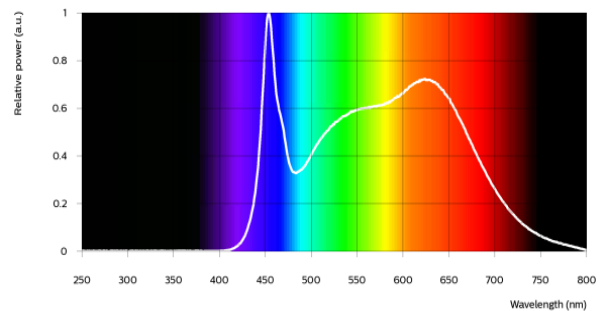


InteGrade engine NB Vi 1430mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	2690	2908	3490	lm
Flux within 120° cone		2675		lm
Efficacy		107		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.359)		-
Color consistency			3	SDCM
CRI	93	95		
R9	85			
Photometric code		940/359		
Radiation angle		26		deg
Peak intensity		3132		cd
Photobiological safety			RG1 unlimited	



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

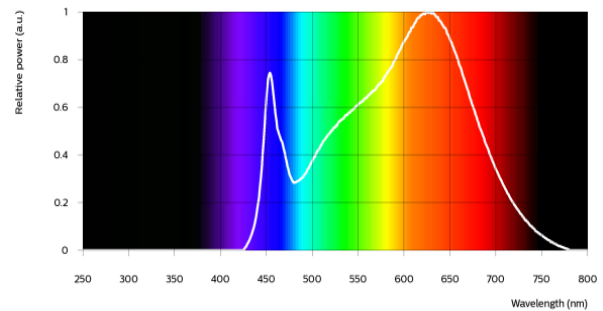


InteGrade engine NB Vi 1570mm 930 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	2718	2938	3525	lm
Flux within 120° cone		2703		lm
Efficacy		98		lm/W
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.419, 0.381)		-
Color consistency			3	SDCM
CRI	93	95		
R9	75			
Photometric code		930/359		
Radiation angle		26		deg
Peak intensity		3164		cd
Photobiological safety			RG1 unlimited	



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

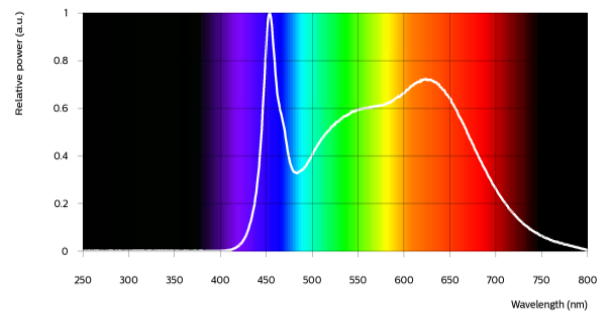


InteGrade engine NB Vi 1570mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Luminous flux	2954	3193	3832	lm
Flux within 120° cone		2938		lm
Efficacy		106		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.359)		-
Color consistency			3	SDCM
CRI	93	95		
R9	85			
Photometric code		940/359		
Radiation angle		26		deg
Peak intensity		3439		cd
Photobiological safety			RG1 unlimited	

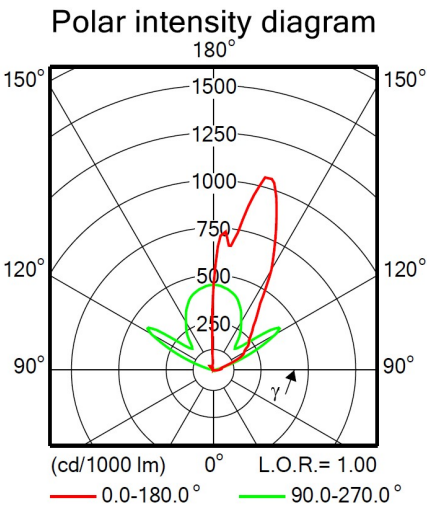


Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



Beam shape

Light distribution, scaled to cd per 1000lm



Electrical characteristics

[InteGrade engine NB Vi 140mm 930 PW G4](#)

[InteGrade engine NB Vi 140mm 940 PW G4](#)

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		2.7		W = kWh/1000h
Number of modules per chain			15	

[InteGrade engine NB Vi 575mm 930 PW G4](#)

[InteGrade engine NB Vi 575mm 940 PW G4](#)

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		11.0		W = kWh/1000h
Number of modules per chain			7	

[InteGrade engine NB Vi 760mm 940 PW G4](#)

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		14.5		W = kWh/1000h
Number of modules per chain			2	

[InteGrade engine NB Vi 855mm 940 PW G4](#)

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		16.3		W = kWh/1000h
Number of modules per chain			2	

[InteGrade engine NB Vi 1150mm 930 PW G4](#)

[InteGrade engine NB Vi 1150mm 940 PW G4](#)

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		21.9		W = kWh/1000h
Number of modules per chain			3	

[InteGrade engine NB Vi 1430mm 930 PW G4](#)

[InteGrade engine NB Vi 1430mm 940 PW G4](#)

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		27.3		W = kWh/1000h
Number of modules per chain			1	

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		30.0		W = kWh/1000h
Number of modules per chain			1	

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

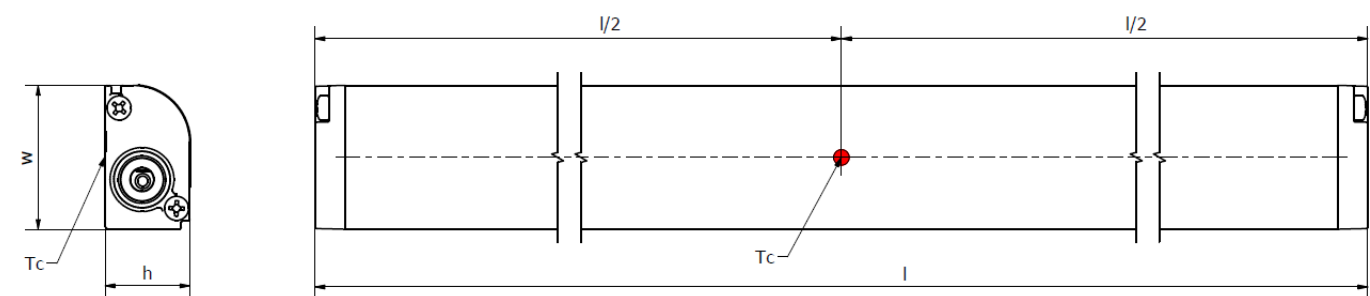
Parameter	Value	Unit
M70F50 nominal	100000	hours
M70F50 life	100000	hours

Mechanical characteristics

InteGrade engine NB Vi 140mm 930 PW G4
 InteGrade engine NB 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

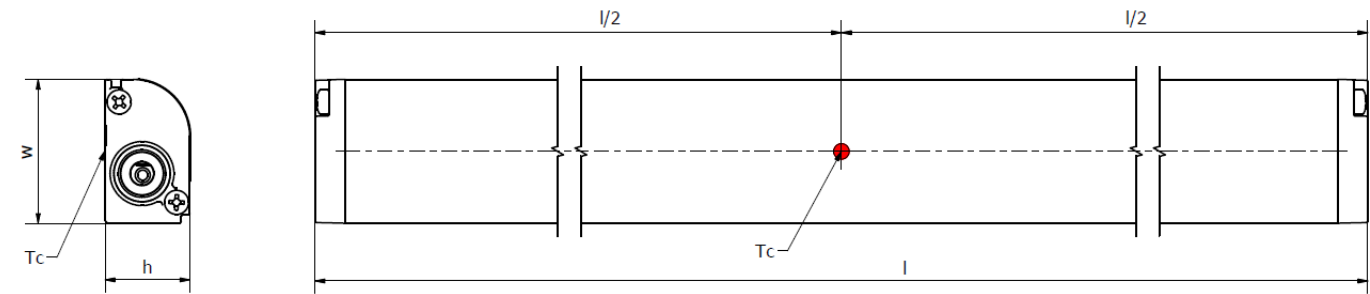
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine NB Vi 1430mm 930 PW G4
InteGrade engine NB Vi 1430mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Length	1426	1430	1434	mm
Width	19.3	19.7	20.1	mm
Height total	12.4	12.9	13.4	mm
Product mass		310		gram

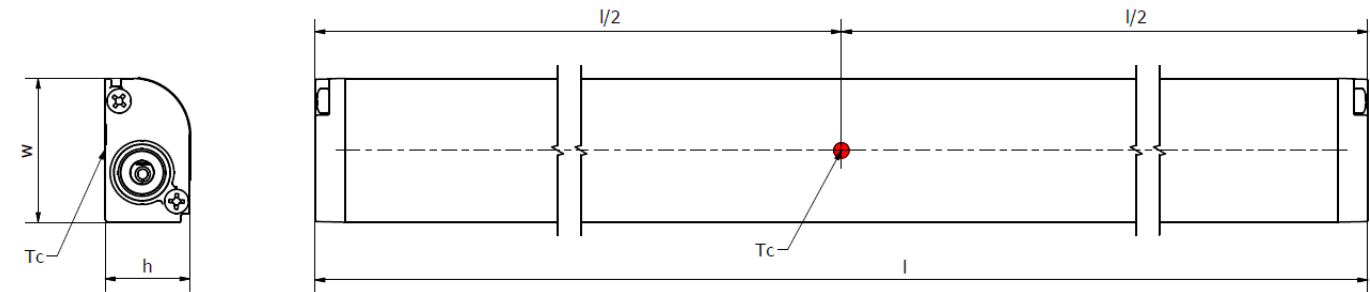
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine NB Vi 1570mm 930 PW G4
InteGrade engine NB Vi 1570mm 940 PW G4

Parameter	Min	Typ	Max	Unit
Length	1566	1570	1574	mm
Width	19.3	19.7	20.1	mm
Height total	12.4	12.9	13.4	mm
Product mass		340		gram

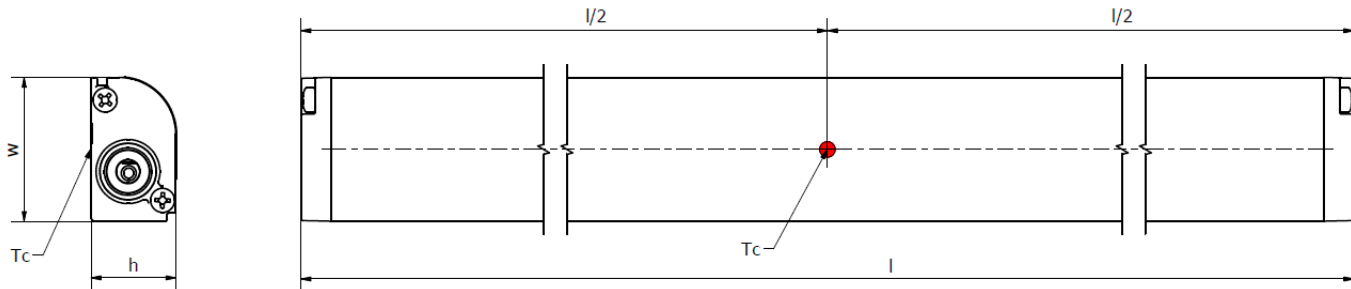
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine NB Vi 575mm 930 PW G4
InteGrade engine NB 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

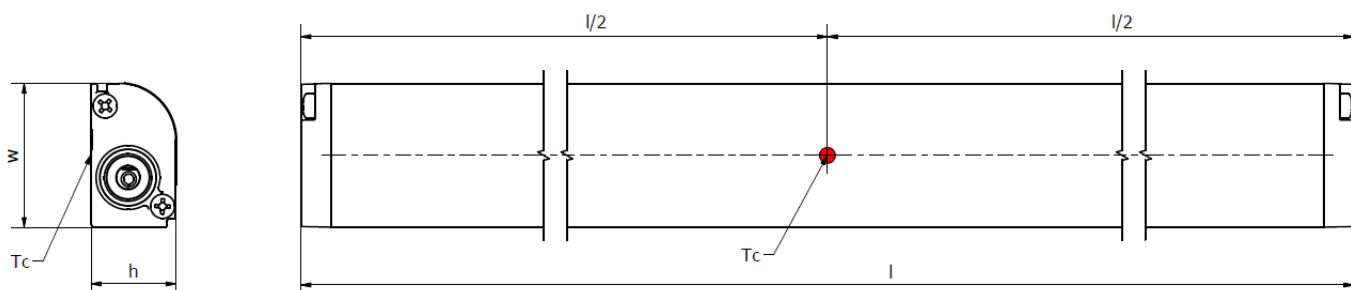
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine NB 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

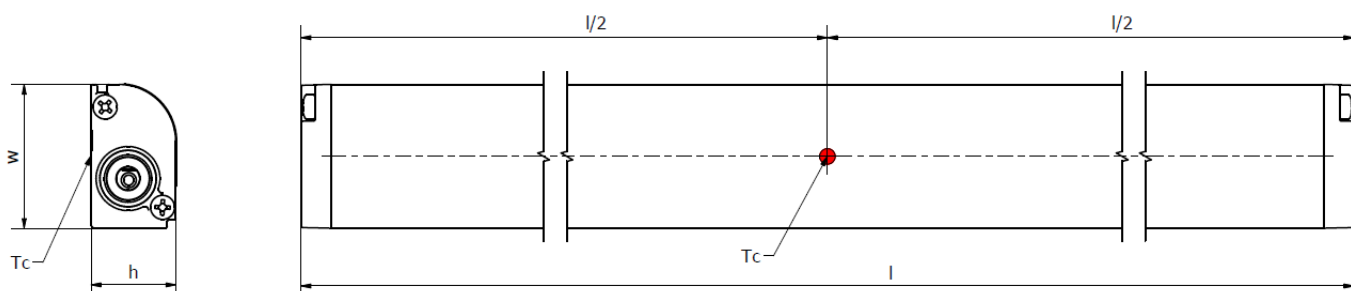
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine NB 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

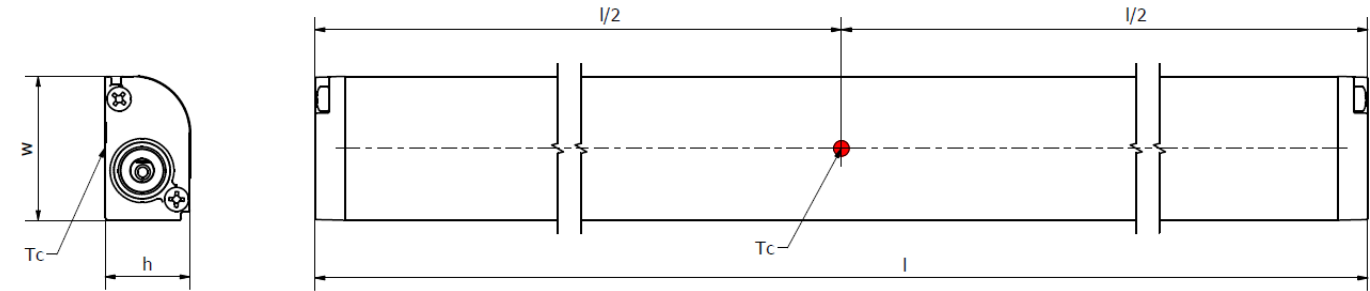
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine NB Vi 1150mm 930 PW G4
InteGrade engine NB 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 (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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15/01/2024