

PHILIPS

InteGrade

LED

InteGrade engine NB
Vision G5



Datasheet

Key features and benefits

- Miniaturized slim design for aesthetic integration
- Premium color consistency up to 5 SDCM over lifetime
- Natural merchandise color with specially formulated LEDs up to CRI95
- Modules performing up to 177 lm/W
- Maximum design flexibility with extensive range of engine lengths
- Color temperatures (3000 PW, 4000 PW, 5600K)
- Breakthrough optical design for excellent uniformity and best merchandize presentation
- True System proposition with five-year system warranty with Philips LED Power Drivers
- Reduced power consumption for energy saving
- Long lifetime: >100,000 hours
- Dimmable

December 2025



Ordering data

Commercial product name	EOC	12NC	Box quantity
InteGrade engine NB Vi 140mm 930 PW G5	8720169 348257 00	9290 039 84506	24
InteGrade engine NB Vi 140mm 940 PW G5	8720169 345904 00	9290 039 84606	24
InteGrade engine NB Vi 575mm 930 PW G5	8720169 348653 00	9290 039 84906	24
InteGrade engine NB Vi 575mm 940 PW G5	8720169 346000 00	9290 039 85006	24
InteGrade engine NB Vi 760mm 940 PW G5	8720169 346024 00	9290 039 89506	24
InteGrade engine NB Vi 760mm 956 G5	8720169 349018 00	9290 039 89006	24
InteGrade engine NB Vi 855mm 940 PW G5	8720169 350199 00	9290 039 89606	24
InteGrade engine NB Vi 855mm 956 G5	8720169 350175 00	9290 039 89106	24
InteGrade engine NB Vi 1150mm 930 PW G5	8720169 349377 00	9290 039 85106	24
InteGrade engine NB Vi 1150mm 940 PW G5	8720169 346086 00	9290 039 85206	24
InteGrade engine NB Vi 1150mm 956 G5	8720169 349513 00	9290 039 89206	24
InteGrade engine NB Vi 1430mm 930 PW G5	8720169 349636 00	9290 039 84706	24
InteGrade engine NB Vi 1430mm 940 PW G5	8720169 346123 00	9290 039 84806	24
InteGrade engine NB Vi 1430mm 956 G5	8720169 349650 00	9290 039 89306	24
InteGrade engine NB Vi 1570mm 930 PW G5	8720169 349711 00	9290 039 85306	24
InteGrade engine NB Vi 1570mm 940 PW G5	8720169 346246 00	9290 039 85406	24
InteGrade engine NB Vi 1570mm 956 G5	8720169 349759 00	9290 039 89406	24
InteGrade engine NB Vi 1660mm 930 PW G5	8720169 349810 00	9290 039 87706	24
InteGrade engine NB Vi 1660mm 940 PW G5	8720169 346284 00	9290 039 87806	24

EPREL Registration Number

Name	12NC	Light Source 1	Light Source 2	Light Source 3	Light Source 4	Light Source 5
InteGrade engine NB Vi 140mm 930 PW G5	9290 039 84506	2462054				
InteGrade engine NB Vi 140mm 940 PW G5	9290 039 84606	2462062				
InteGrade engine NB Vi 575mm 930 PW G5	9290 039 84906	2461909				
InteGrade engine NB Vi 575mm 940 PW G5	9290 039 85006	2462000				
InteGrade engine NB Vi 760mm 940 PW G5	9290 039 89506	2462071	2461849			
InteGrade engine NB Vi 760mm 956 G5	9290 039 89006	2462072	2461841			
InteGrade engine NB Vi 855mm 940 PW G5	9290 039 89606	2462064	2461862	2462068		
InteGrade engine NB Vi 855mm 956 G5	9290 039 89106	2462049	2461857	2462051		
InteGrade engine NB Vi 1150mm 930 PW G5	9290 039 85106	2461933	2461957			
InteGrade engine NB Vi 1150mm 940 PW G5	9290 039 85206	2462021	2461842			
InteGrade engine NB Vi 1150mm 956 G5	9290 039 89206	2461859	2461910			
InteGrade engine NB Vi 1430mm 930 PW G5	9290 039 84706	2462057	2461978	2461978	2462059	
InteGrade engine NB Vi 1430mm 940 PW G5	9290 039 84806	2462064	2461862	2461862	2462068	
InteGrade engine NB Vi 1430mm 956 G5	9290 039 89306	2462049	2461857	2461857	2462051	
InteGrade engine NB Vi 1570mm 930 PW G5	9290 039 85306	2462057	2461978	2462061	2461978	2462059
InteGrade engine NB Vi 1570mm 940 PW G5	9290 039 85406	2462064	2461862	2462069	2461862	2462068
InteGrade engine NB Vi 1570mm 956 G5	9290 039 89406	2462049	2461857	2462052	2461857	2462051
InteGrade engine NB Vi 1660mm 930 PW G5	9290 039 87706	2461843	2461844	2462061	2461844	2461846
InteGrade engine NB Vi 1660mm 940 PW G5	9290 039 87806	2462071	2461848	2462069	2461848	2461849

Key Specifications at Nominal conditions

Name	12NC	Power (W)	Luminous Flux (lm)	Useful Flux (lm)	CRI
InteGrade engine NB Vi 140mm 930 PW G5	9290 039 84506	2.0	266	245	94
InteGrade engine NB Vi 140mm 940 PW G5	9290 039 84606	2.0	285	262	95
InteGrade engine NB Vi 575mm 930 PW G5	9290 039 84906	8.2	1091	1004	94
InteGrade engine NB Vi 575mm 940 PW G5	9290 039 85006	8.2	1169	1075	95
InteGrade engine NB Vi 760mm 940 PW G5	9290 039 89506	10.8	1549	1425	95
InteGrade engine NB Vi 760mm 956 G5	9290 039 89006	8.8	1291	1188	90
InteGrade engine NB Vi 855mm 940 PW G5	9290 039 89606	12.2	1739	1600	95
InteGrade engine NB Vi 855mm 956 G5	9290 039 89106	10.7	1557	1432	90
InteGrade engine NB Vi 1150mm 930 PW G5	9290 039 85106	16.4	2182	2007	94
InteGrade engine NB Vi 1150mm 940 PW G5	9290 039 85206	16.4	2338	2151	95
InteGrade engine NB Vi 1150mm 956 G5	9290 039 89206	14.2	2093	1926	90
InteGrade engine NB Vi 1430mm 930 PW G5	9290 039 84706	20.4	2714	2497	94
InteGrade engine NB Vi 1430mm 940 PW G5	9290 039 84806	20.4	2908	2675	95
InteGrade engine NB Vi 1430mm 956 G5	9290 039 89306	17.8	2603	2395	90
InteGrade engine NB Vi 1570mm 930 PW G5	9290 039 85306	22.4	2980	2742	94
InteGrade engine NB Vi 1570mm 940 PW G5	9290 039 85406	22.4	3193	2938	95
InteGrade engine NB Vi 1570mm 956 G5	9290 039 89406	19.6	2858	2629	90
InteGrade engine NB Vi 1660mm 930 PW G5	9290 039 87706	23.6	3158	2905	94
InteGrade engine NB Vi 1660mm 940 PW G5	9290 039 87806	23.6	3383	3112	95

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 and electrical characteristics

[InteGrade engine NB Vi 140mm 930 PW G5](#)

[InteGrade engine NB Vi 140mm 940 PW G5](#)

CCT	3000K PW	4000K PW	Unit
Average Luminous flux (tolerance -9% + 22%)	266	285	lm
Flux within 120° cone	245	262	lm
Average Efficacy	133	142	lm/W
Max. Efficacy	162	168	lm/W
Color consistency	3	3	SDCM
Color coordinates (CIEx, CIEy)	0.424, 0.386	0.377, 0.365	
Min. CRI	94	95	
Min. R9	65	85	
Radiation angle	25	25	°
Peak intensity	286	307	cd
Max. Photobiological safety	RG1 unlimited	RG1 unlimited	
Input voltage	24	24	V
Power consumption	2.0	2.0	W
Max. # of modules per chain	15	15	
Product contains light sources of energy class:	E	D	

[InteGrade engine NB Vi 575mm 930 PW G5](#)

[InteGrade engine NB Vi 575mm 940 PW G5](#)

CCT	3000K PW	4000K PW	Unit
Average Luminous flux (tolerance -9% + 22%)	1091	1169	lm
Flux within 120° cone	1004	1075	lm
Average Efficacy	133	143	lm/W
Max. Efficacy	162	167	lm/W
Color consistency	3	3	SDCM
Color coordinates (CIEx, CIEy)	0.424, 0.386	0.377, 0.365	
Min. CRI	94	95	
Min. R9	65	85	
Radiation angle	25	25	°
Peak intensity	1175	1259	cd
Max. Photobiological safety	RG1 unlimited	RG1 unlimited	
Input voltage	24	24	V
Power consumption	8.2	8.2	W
Max. # of modules per chain	7	7	
Product contains light sources of energy class:	E	D	

[InteGrade engine NB Vi 760mm 940 PW G5](#)

[InteGrade engine NB Vi 760mm 956 G5](#)

CCT	4000K PW	5600K	Unit
Average Luminous flux (tolerance -9% + 22%)	1549	1291	lm
Flux within 120° cone	1425	1188	lm
Average Efficacy	143	147	lm/W
Max. Efficacy	168	176	lm/W
Color consistency	3	5	SDCM
Color coordinates (CIEx, CIEy)	0.377, 0.365	0.335, 0.350	
Min. CRI	95	90	
Min. R9	85	65	
Radiation angle	25	25	°
Peak intensity	1668	1390	cd
Max. Photobiological safety	RG1 unlimited	RG1 unlimited	
Input voltage	24	24	V
Power consumption	10.8	8.8	W
Max. # of modules per chain	2	2	
Product contains light sources of energy class:	D	D	

[InteGrade engine NB Vi 855mm 940 PW G5](#)

[InteGrade engine NB Vi 855mm 956 G5](#)

CCT	4000K PW	5600K	Unit
Average Luminous flux (tolerance -9% + 22%)	1739	1557	lm
Flux within 120° cone	1600	1432	lm
Average Efficacy	143	146	lm/W
Max. Efficacy	167	175	lm/W
Color consistency	3	5	SDCM
Color coordinates (CIEx, CIEy)	0.377, 0.365	0.335, 0.350	
Min. CRI	95	90	
Min. R9	85	65	
Radiation angle	25	25	°
Peak intensity	1873	1677	cd
Max. Photobiological safety	RG1 unlimited	RG1 unlimited	
Input voltage	24	24	V
Power consumption	12.2	10.7	W
Max. # of modules per chain	2	2	
Product contains light sources of energy class:	D	D	

[InteGrade engine NB Vi 1150mm 930 PW G5](#)
[InteGrade engine NB Vi 1150mm 940 PW G5](#)
[InteGrade engine NB Vi 1150mm 956 G5](#)

CCT	3000K PW	4000K PW	5600K	Unit
Average Luminous flux (tolerance -9% + 22%)	2182	2338	2093	lm
Flux within 120° cone	2007	2151	1926	lm
Average Efficacy	133	143	147	lm/W
Max. Efficacy	162	167	177	lm/W
Color consistency	3	3	5	SDCM
Color coordinates (CIEx, CIEy)	0.424, 0.386	0.377, 0.365	0.335, 0.350	
Min. CRI	94	95	90	
Min. R9	65	85	65	
Radiation angle	25	25	25	°
Peak intensity	2350	2518	2254	cd
Max. Photobiological safety	RG1 unlimited	RG1 unlimited	RG1 unlimited	
Input voltage	24	24	24	V
Power consumption	16.4	16.4	14.2	W
Max. # of modules per chain	3	3	1	
Product contains light sources of energy class:	E	D	D	

[InteGrade engine NB Vi 1430mm 930 PW G5](#)
[InteGrade engine NB Vi 1430mm 940 PW G5](#)
[InteGrade engine NB Vi 1430mm 956 G5](#)

CCT	3000K PW	4000K PW	5600K	Unit
Average Luminous flux (tolerance -9% + 22%)	2714	2908	2603	lm
Flux within 120° cone	2497	2675	2395	lm
Average Efficacy	133	143	146	lm/W
Max. Efficacy	162	167	175	lm/W
Color consistency	3	3	5	SDCM
Color coordinates (CIEx, CIEy)	0.424, 0.386	0.377, 0.365	0.335, 0.350	
Min. CRI	94	95	90	
Min. R9	65	85	65	
Radiation angle	25	25	25	°
Peak intensity	2923	3132	2803	cd
Max. Photobiological safety	RG1 unlimited	RG1 unlimited	RG1 unlimited	
Input voltage	24	24	24	V
Power consumption	20.4	20.4	17.8	W
Max. # of modules per chain	1	1	1	
Product contains light sources of energy class:	E	D	D	

[InteGrade engine NB Vi 1570mm 930 PW G5](#)

[InteGrade engine NB Vi 1570mm 940 PW G5](#)

[InteGrade engine NB Vi 1570mm 956 G5](#)

CCT	3000K PW	4000K PW	5600K	Unit
Average Luminous flux (tolerance -9% + 22%)	2980	3193	2858	lm
Flux within 120° cone	2742	2938	2629	lm
Average Efficacy	133	143	146	lm/W
Max. Efficacy	162	167	175	lm/W
Color consistency	3	3	5	SDCM
Color coordinates (CIEx, CIEy)	0.424, 0.386	0.377, 0.365	0.335, 0.350	
Min. CRI	94	95	90	
Min. R9	65	85	65	
Radiation angle	25	25	25	°
Peak intensity	3209	3439	3078	cd
Max. Photobiological safety	RG1 unlimited	RG1 unlimited	RG1 unlimited	
Input voltage	24	24	24	V
Power consumption	22.4	22.4	19.6	W
Max. # of modules per chain	1	1	1	
Product contains light sources of energy class:	E	D	D	

[InteGrade engine NB Vi 1660mm 930 PW G5](#)

[InteGrade engine NB Vi 1660mm 940 PW G5](#)

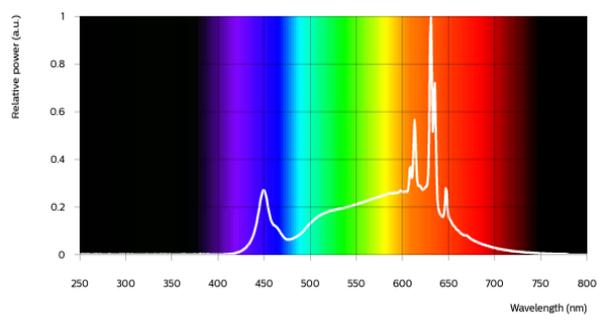
CCT	3000K PW	4000K PW	Unit
Average Luminous flux (tolerance -9% + 22%)	3158	3383	lm
Flux within 120° cone	2905	3112	lm
Average Efficacy	134	143	lm/W
Max. Efficacy	163	168	lm/W
Color consistency	3	3	SDCM
Color coordinates (CIEx, CIEy)	0.424, 0.386	0.377, 0.365	
Min. CRI	94	95	
Min. R9	65	85	
Radiation angle	25	25	°
Peak intensity	3401	3643	cd
Max. Photobiological safety	RG1 unlimited	RG1 unlimited	
Input voltage	24	24	V
Power consumption	23.6	23.6	W
Max. # of modules per chain	1	1	
Product contains light sources of energy class:	D,E	D	

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

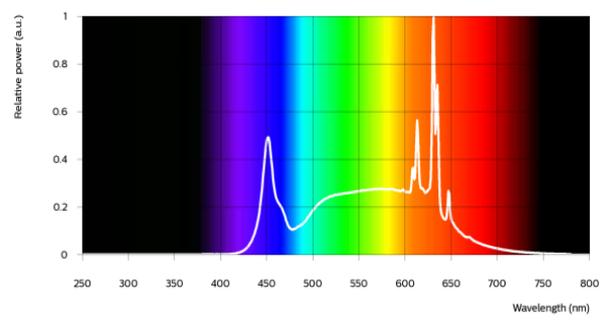
Measurement precision for Vf +/- 3%. Measurement precision for power +/- 3.3%.

Spectral characteristics

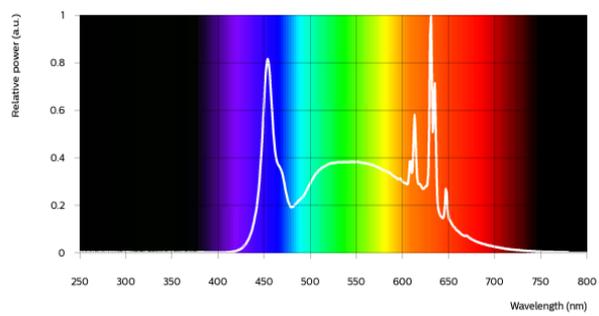
3000K PW



4000K PW

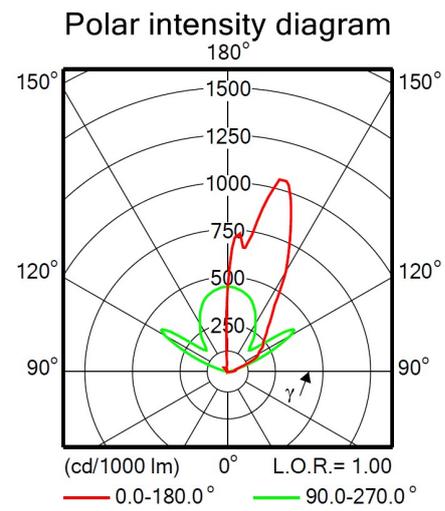


5600K



Beam shape

Light distribution, scaled to cd per 1000lm



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

We use a Philips designed lifetime model, which uses LM80 data as only one of its inputs and assumes a continues operation of the module.

*B20 and B10 values are calculated by means of statistical techniques.

Lifetime

Parameter	Value	Unit
M70F50 nominal	100000	hours

@Ta=30°C

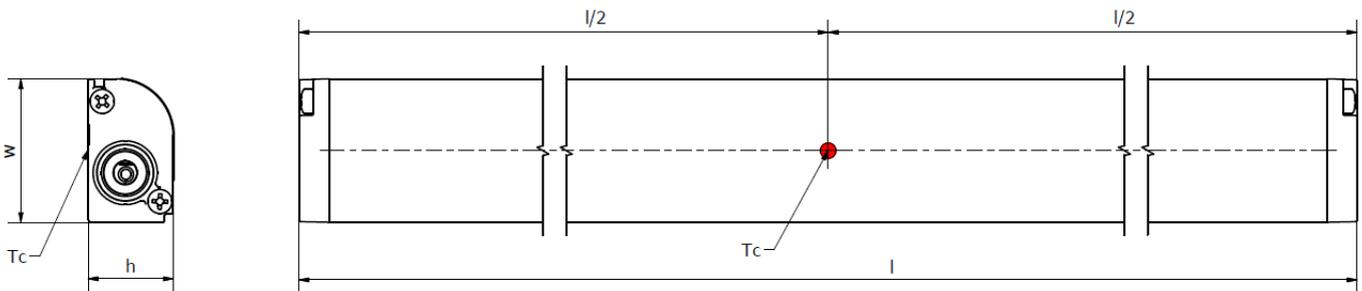
Mechanical characteristics

InteGrade engine NB Vi 140mm 930 PW G5

InteGrade engine NB Vi 140mm 940 PW G5

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		34		gram

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

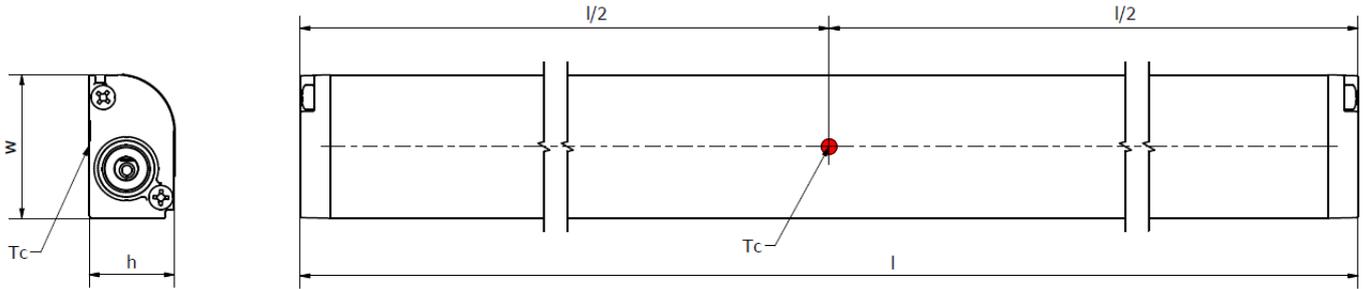


InteGrade engine NB Vi 575mm 930 PW G5

InteGrade engine NB Vi 575mm 940 PW G5

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		130		gram

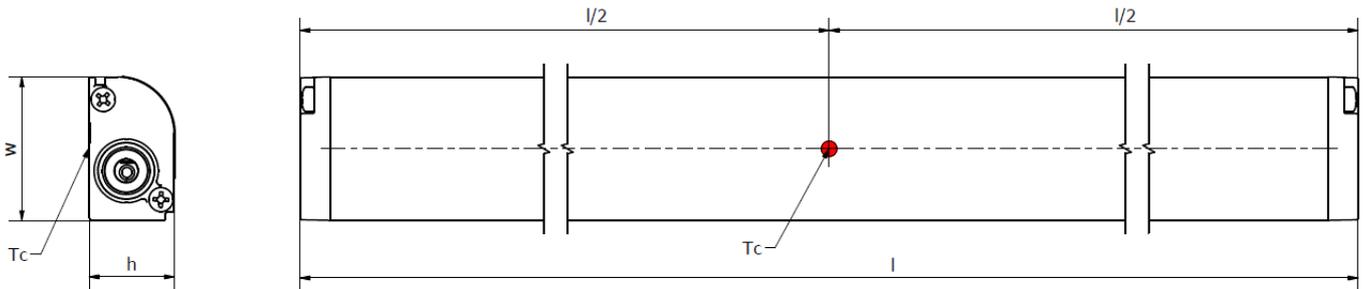
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine NB Vi 760mm 940 PW G5
 InteGrade engine NB Vi 760mm 956 G5

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		170		gram

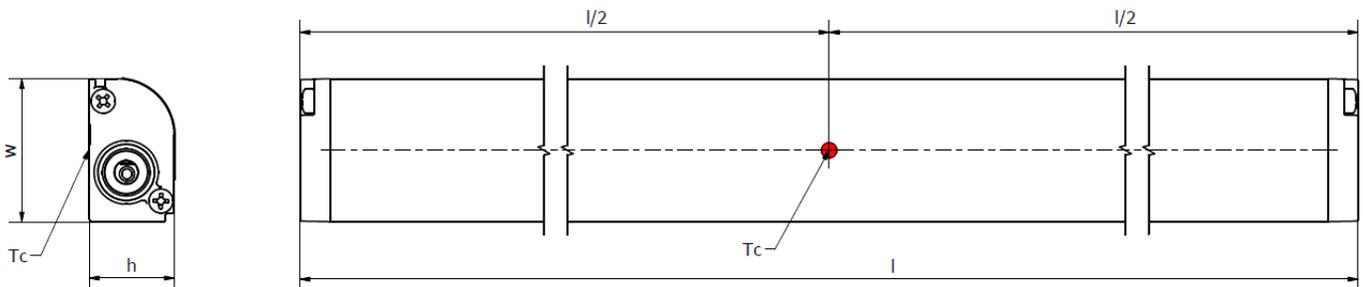
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine NB Vi 855mm 940 PW G5
 InteGrade engine NB Vi 855mm 956 G5

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		200		gram

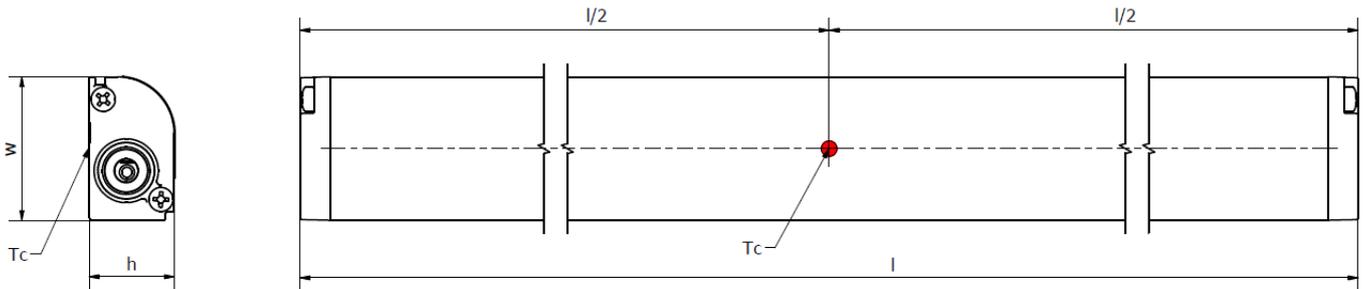
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine NB Vi 1430mm 930 PW G5
 InteGrade engine NB Vi 1430mm 940 PW G5
 InteGrade engine NB Vi 1430mm 956 G5

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		320		gram

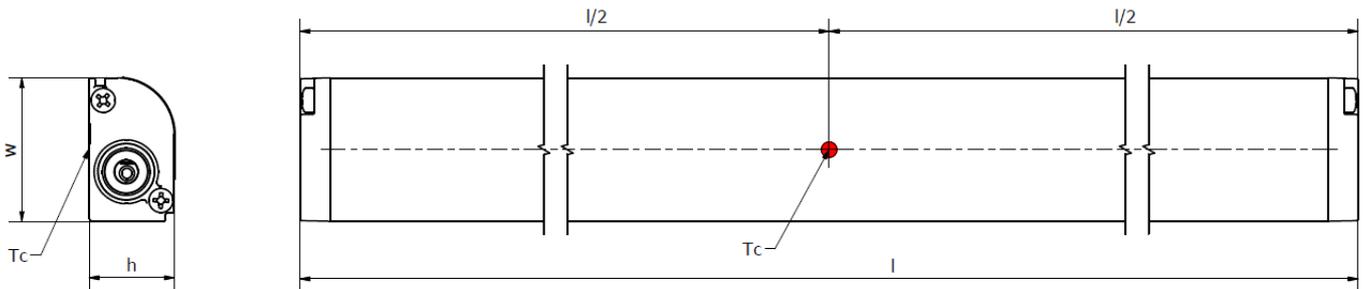
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine NB Vi 1570mm 930 PW G5
 InteGrade engine NB Vi 1570mm 940 PW G5
 InteGrade engine NB Vi 1570mm 956 G5

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		350		gram

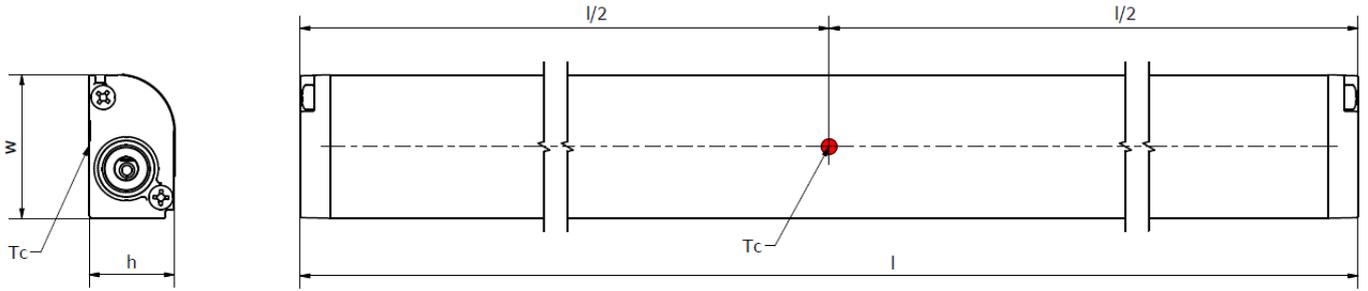
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine NB Vi 1660mm 930 PW G5
 InteGrade engine NB Vi 1660mm 940 PW G5

Parameter	Min	Typ	Max	Unit
Length	1656	1660	1664	mm
Width	19.3	19.7	20.1	mm
Height total	12.4	12.9	13.4	mm
Product mass		380		gram

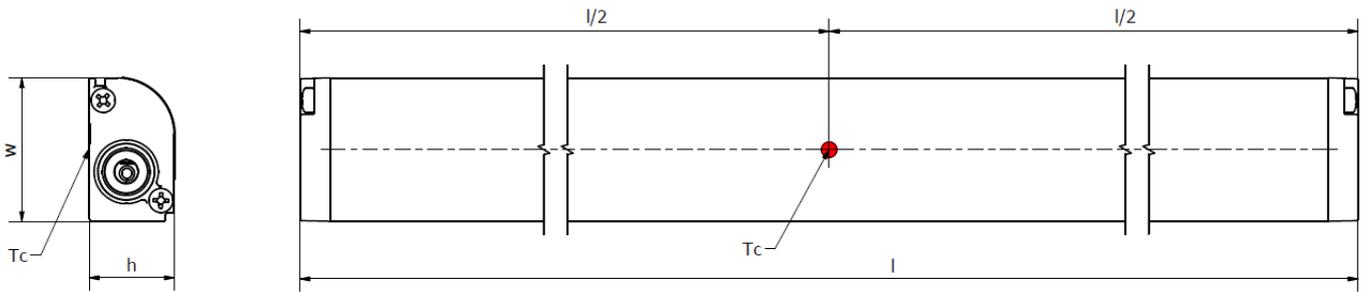
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade engine NB Vi 1150mm 930 PW G5
 InteGrade engine NB Vi 1150mm 940 PW G5
 InteGrade engine NB Vi 1150mm 956 G5

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		260		gram

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



Absolute ratings

Parameter	Min	Max	Unit
Case temperature (Tc-max)		50	°C
Working voltage		24	V _{dc}
Ambient temperature	-30	30	°C

Application information

Certificates and Standards

IEC/EN 62031

ENEC

Relevant clauses of IEC/EN 60335-1

Relevant clauses of IEC/EN 60335-2-89

Clause 5.3 of IEC/EN 60079-7 as required by clause 22.112 of IEC/EN 60335-2-89

Relevant clauses of IEC/EN 60335-2-24

CSA C22.2 No. 250.2

UL 2108

IK02 (IEC 62262 and IEC 60068-2-75)

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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