PHILIPS

InteGrade

LED

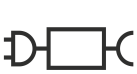
InteGrade Fixture NB value PW G4

Datasheet

Key features and benefits

- 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
- Integrated fixtures for ease of installation and reduced system level cost
- Modules performing up to 119 lm/w meeting SLR (Single Lighting Regulation)
- 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
- Dimmable

September 2021



Ordering data

Commercial product name	EOC	12NC	Box quantity
InteGrade F NB Va 1180mm 930 PW CTR G4	8718699 757274 00	9290 021 89406	6
InteGrade F NB Va 1180mm 930 PW SD G4	8718699 757236 00	9290 021 89206	6
InteGrade F NB Va 1180mm 940 PW CTR G4	8718699 757298 00	9290 021 89506	6
InteGrade F NB Va 1180mm 940 PW SD G4	8718699 757250 00	9290 021 89306	6
InteGrade F NB Va 1460mm 930 PW CTR G4	8718699 757595 00	9290 021 89006	6
InteGrade F NB Va 1460mm 930 PW SD G4	8718699 757557 00	9290 021 88806	6
InteGrade F NB Va 1460mm 940 PW CTR G4	8718699 757618 00	9290 021 89106	6
InteGrade F NB Va 1460mm 940 PW SD G4	8718699 757571 00	9290 021 88906	6
InteGrade F NB Va 1600mm 930 PW CTR G4	8718699 757670 00	9290 021 89806	6
InteGrade F NB Va 1600mm 930 PW SD G4	8718699 757632 00	9290 021 89606	6
InteGrade F NB Va 1600mm 940 PW CTR G4	8718699 757694 00	9290 021 89906	6
InteGrade F NB Va 1600mm 940 PW SD G4	8718699 757656 00	9290 021 89706	6

Key Specifications at Nominal conditions

Name	12NC	Power (W)	Luminous Flux (lm)	Useful Flux (lm)	CRI
InteGrade F NB Va 1180mm 930 PW CTR G4	9290 021 89406	17.6	1919	1765	95
InteGrade F NB Va 1180mm 930 PW SD G4	9290 021 89206	8.82	960	883	95
InteGrade F NB Va 1180mm 940 PW CTR G4	9290 021 89506	17.6	2086	1919	95
InteGrade F NB Va 1180mm 940 PW SD G4	9290 021 89306	8.82	1043	960	95
InteGrade F NB Va 1460mm 930 PW CTR G4	9290 021 89006	22.2	2412	2219	95
InteGrade F NB Va 1460mm 930 PW SD G4	9290 021 88806	11.1	1206	1110	95
InteGrade F NB Va 1460mm 940 PW CTR G4	9290 021 89106	22.0	2608	2399	95
InteGrade F NB Va 1460mm 940 PW SD G4	9290 021 88906	11.0	1304	1200	95
InteGrade F NB Va 1600mm 930 PW CTR G4	9290 021 89806	24.4	2658	2445	95
InteGrade F NB Va 1600mm 930 PW SD G4	9290 021 89606	12.2	1329	1223	95
InteGrade F NB Va 1600mm 940 PW CTR G4	9290 021 89906	24.2	2869	2639	95
InteGrade F NB Va 1600mm 940 PW SD G4	9290 021 89706	12.1	1434	1319	95

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

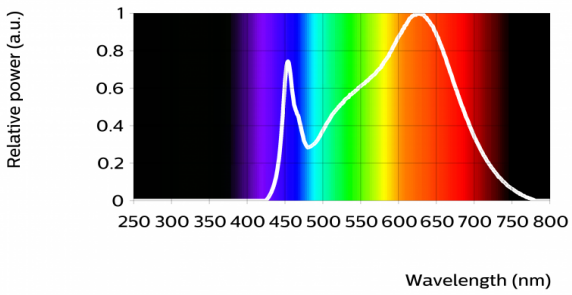
*** Maximum value for safe operation, do not operate above this value

Optical characteristics - table per color (CCT)

InteGrade F NB Va 1180mm 930 PW CTR G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1775	1919	2303	lm
Flux within 120° cone		1765		lm
Module efficacy		109		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		1307		cd
Photobiological safety			RG1 unlimited	

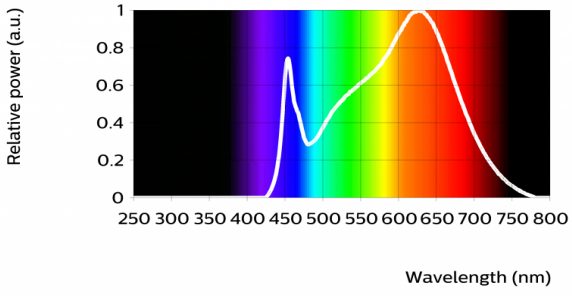
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade F NB Va 1180mm 930 PW SD G4

Parameter	Min	Typ	Max	Unit
Luminous flux	888	960	1152	lm
Flux within 120° cone		883		lm
Module efficacy		109		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		1343		cd
Photobiological safety			RG1 unlimited	

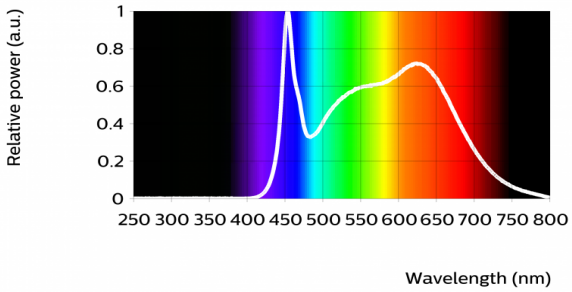
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade F NB Va 1180mm 940 PW CTR G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1930	2086	2504	lm
Flux within 120° cone		1919		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	93	95		
R9	85			
Photometric code		940/359		
Radiation angle		26		deg
Peak intensity		1421		cd
Photobiological safety			RG1 unlimited	

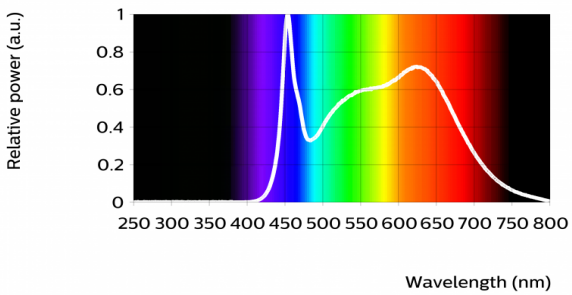
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade F NB Va 1180mm 940 PW SD G4

Parameter	Min	Typ	Max	Unit
Luminous flux	965	1043	1252	lm
Flux within 120° cone		960		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	93	95		
R9	85			
Photometric code		940/359		
Radiation angle		26		deg
Peak intensity		1459		cd
Photobiological safety			RG1 unlimited	

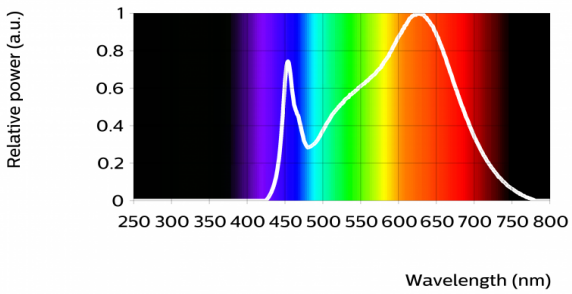
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade F NB Va 1460mm 930 PW CTR G4

Parameter	Min	Typ	Max	Unit
Luminous flux	2231	2412	2894	lm
Flux within 120° cone		2219		lm
Module efficacy		109		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		1643		cd
Photobiological safety			RG1 unlimited	

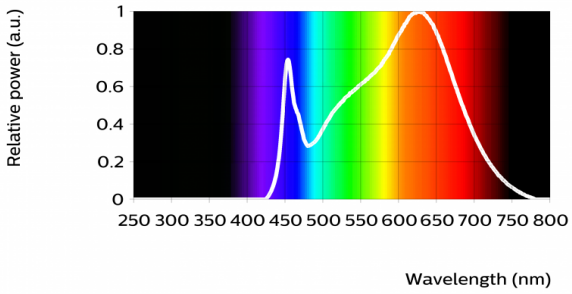
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade F NB Va 1460mm 930 PW SD G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1116	1206	1447	lm
Flux within 120° cone		1110		lm
Module efficacy		109		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		1687		cd
Photobiological safety			RG1 unlimited	

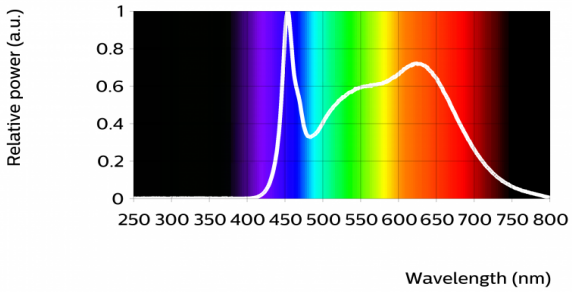
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade F NB Va 1460mm 940 PW CTR G4

Parameter	Min	Typ	Max	Unit
Luminous flux	2412	2608	3130	lm
Flux within 120° cone		2399		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	93	95		
R9	85			
Photometric code		940/359		
Radiation angle		26		deg
Peak intensity		1776		cd
Photobiological safety			RG1 unlimited	

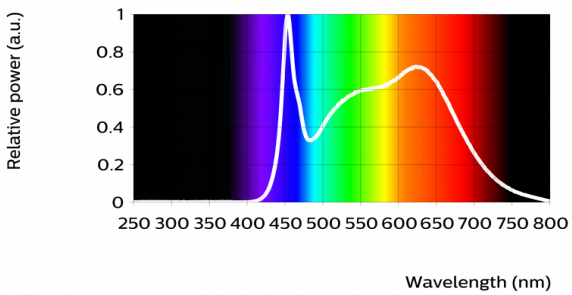
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade F NB Va 1460mm 940 PW SD G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1206	1304	1565	lm
Flux within 120° cone		1200		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	93	95		
R9	85			
Photometric code		940/359		
Radiation angle		26		deg
Peak intensity		1824		cd
Photobiological safety			RG1 unlimited	

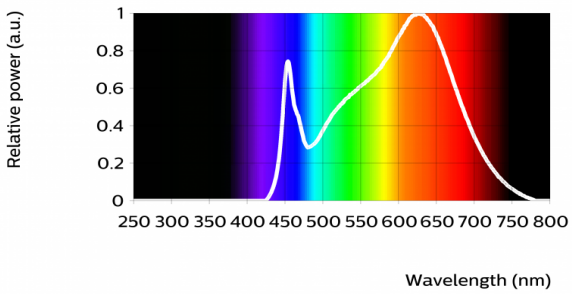
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade F NB Va 1600mm 930 PW CTR G4

Parameter	Min	Typ	Max	Unit
Luminous flux	2459	2658	3190	lm
Flux within 120° cone		2445		lm
Module efficacy		109		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		1810		cd
Photobiological safety			RG1 unlimited	

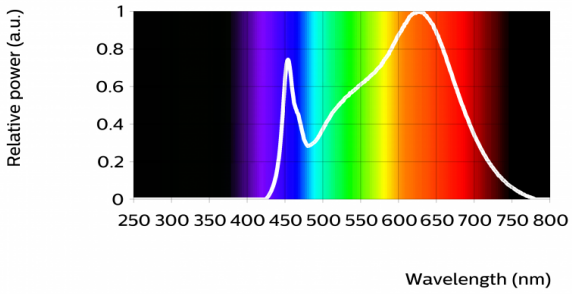
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade F NB Va 1600mm 930 PW SD G4

Parameter	Min	Typ	Max	Unit
Luminous flux	1230	1329	1595	lm
Flux within 120° cone		1223		lm
Module efficacy		109		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		1859		cd
Photobiological safety			RG1 unlimited	

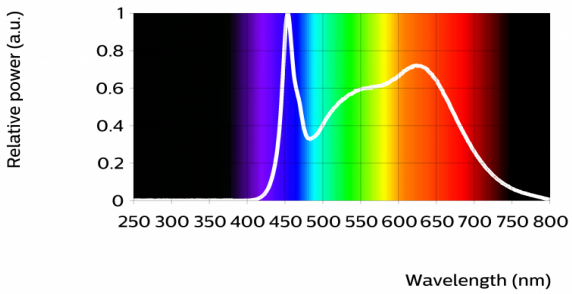
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade F NB Va 1600mm 940 PW CTR G4

Parameter	Min	Typ	Max	Unit
Luminous flux	2654	2869	3443	lm
Flux within 120° cone		2639		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	93	95		
R9	85			
Photometric code		940/359		
Radiation angle		26		deg
Peak intensity		1954		cd
Photobiological safety			RG1 unlimited	

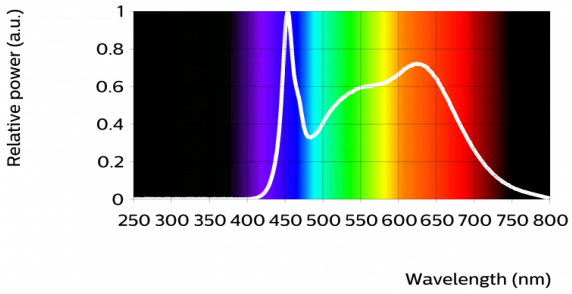
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade F NB Va 1600mm 940 PW SD G4

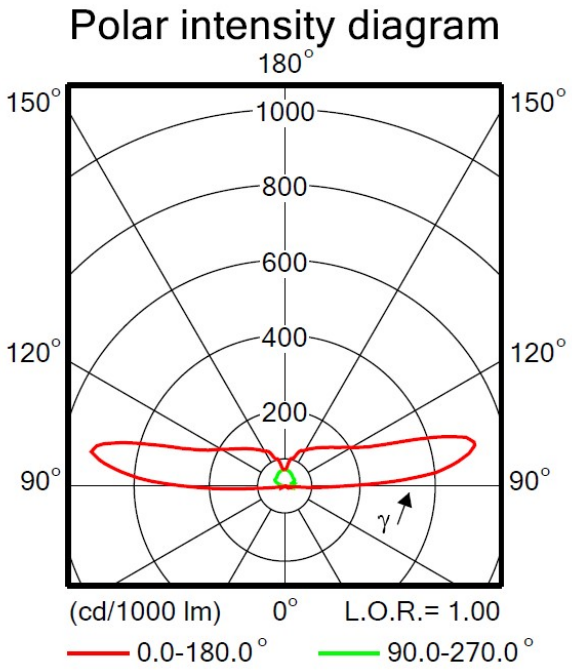
Parameter	Min	Typ	Max	Unit
Luminous flux	1327	1434	1721	lm
Flux within 120° cone		1319		lm
Module efficacy		118		lm/W
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.372, 0.359)		-
Color consistency			3	SDCM
CRI	93	95		
R9	85			
Photometric code		940/359		
Radiation angle		26		deg
Peak intensity		2006		cd
Photobiological safety			RG1 unlimited	

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

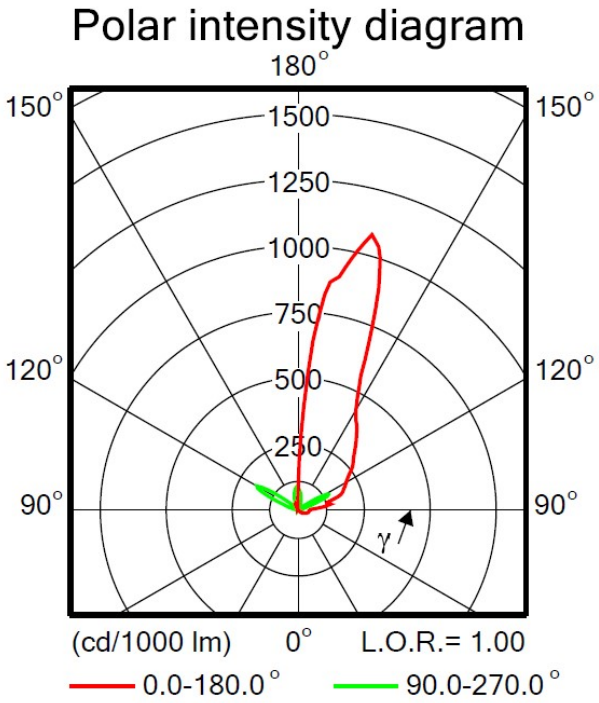


Beam shape

Light distribution of CTR fixture, scaled to cd per 1000lm



Light distribution of SD fixture, scaled to cd per 1000lm



Electrical characteristics

InteGrade F NB Va 1180mm 930 PW CTR G4
InteGrade F NB Va 1180mm 940 PW CTR G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		17.6		W = kWh/1000h
Number of modules per chain			1	

InteGrade F NB Va 1180mm 930 PW SD G4
InteGrade F NB Va 1180mm 940 PW SD G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		8.82		W = kWh/1000h
Number of modules per chain			1	

InteGrade F NB Va 1460mm 930 PW CTR G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		22.2		W = kWh/1000h
Number of modules per chain			1	

InteGrade F NB Va 1460mm 940 PW CTR G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		22.0		W = kWh/1000h
Number of modules per chain			1	

InteGrade F NB Va 1460mm 930 PW SD G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		11.1		W = kWh/1000h
Number of modules per chain			1	

InteGrade F NB Va 1460mm 940 PW SD G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		11.0		W = kWh/1000h
Number of modules per chain			1	

InteGrade F NB Va 1600mm 930 PW CTR G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		24.4		W = kWh/1000h
Number of modules per chain			1	

InteGrade F NB Va 1600mm 930 PW SD G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		12.2		W = kWh/1000h
Number of modules per chain			1	

InteGrade F NB Va 1600mm 940 PW CTR G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		24.2		W = kWh/1000h
Number of modules per chain			1	

InteGrade F NB Va 1600mm 940 PW SD G4

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		12.1		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

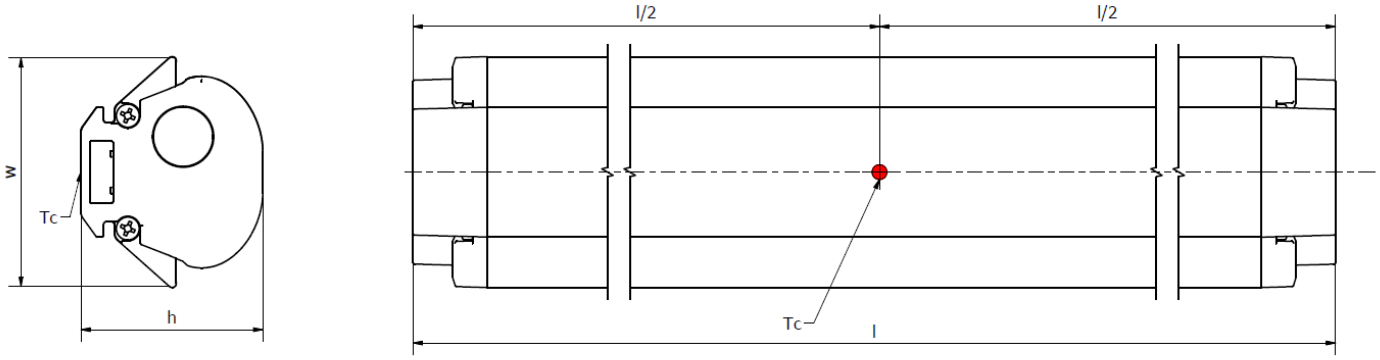
Parameter	Value	Unit
M70F50 nominal	100000	hours
M70F50 life	100000	hours

Mechanical characteristics

InteGrade F NB Va 1180mm 930 PW CTR G4
InteGrade F NB Va 1180mm 940 PW CTR G4

Parameter	Min	Typ	Max	Unit
Length	1176	1180	1184	mm
Width	30.6	31.1	31.6	mm
Height total	23.9	24.5	25.1	mm
Product mass		561		gram

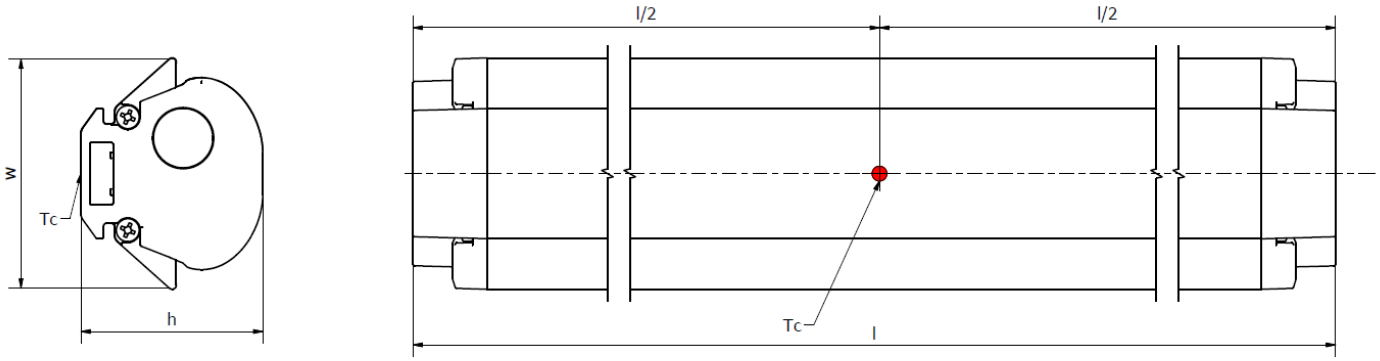
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade F NB Va 1460mm 930 PW CTR G4
InteGrade F NB Va 1460mm 940 PW CTR G4

Parameter	Min	Typ	Max	Unit
Length	1456	1460	1464	mm
Width	30.6	31.1	31.6	mm
Height total	23.9	24.5	25.1	mm
Product mass		701		gram

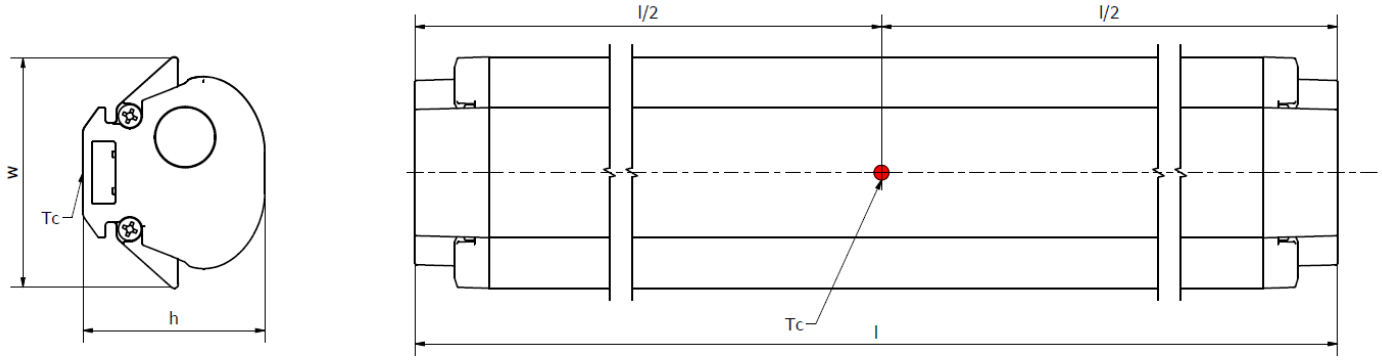
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade F NB Va 1600mm 930 PW CTR G4
InteGrade F NB Va 1600mm 940 PW CTR G4

Parameter	Min	Typ	Max	Unit
Length	1596	1600	1604	mm
Width	30.6	31.1	31.6	mm
Height total	23.9	24.5	25.1	mm
Product mass		786		gram

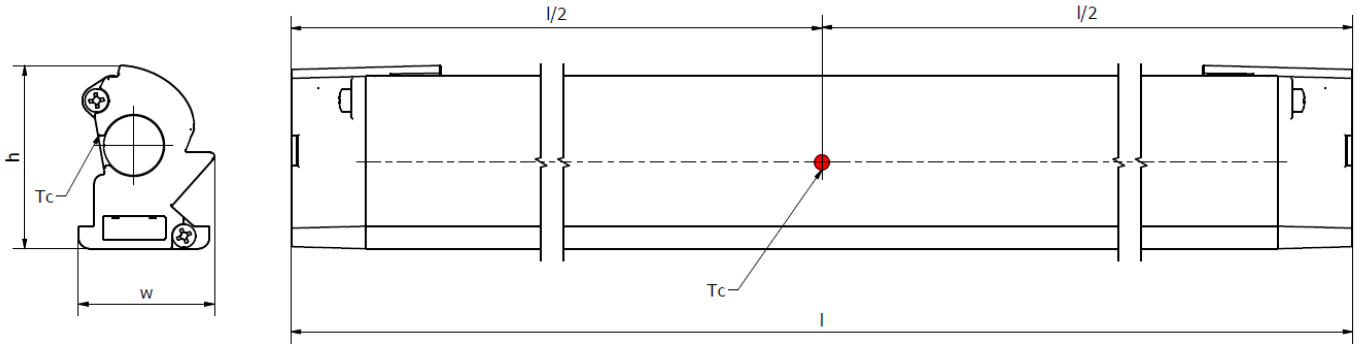
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade F NB Va 1180mm 930 PW SD G4
InteGrade F NB Va 1180mm 940 PW SD G4

Parameter	Min	Typ	Max	Unit
Length	1176	1180	1184	mm
Width	17.7	18.2	18.7	mm
Height total	23.9	24.5	25.1	mm
Product mass		374		gram

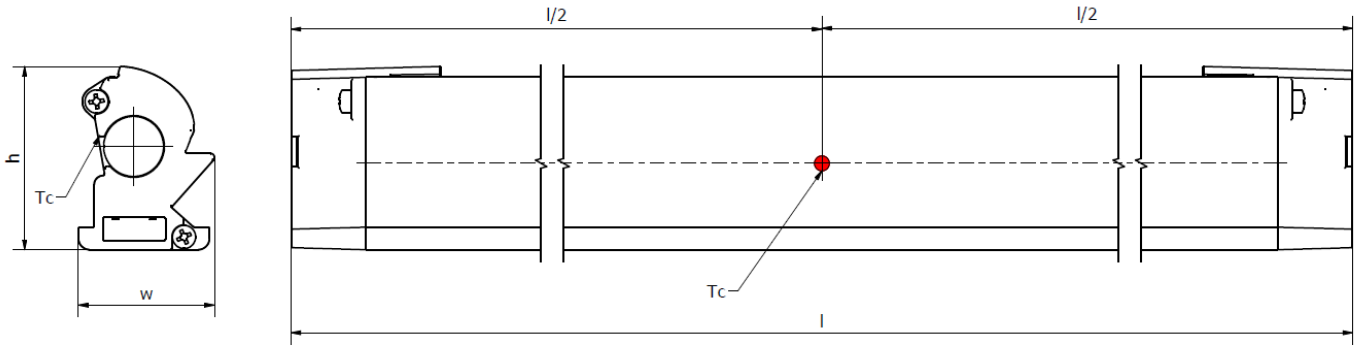
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade F NB Va 1460mm 930 PW SD G4
InteGrade F NB Va 1460mm 940 PW SD G4

Parameter	Min	Typ	Max	Unit
Length	1456	1460	1464	mm
Width	17.7	18.2	18.7	mm
Height total	23.9	24.5	25.1	mm
Product mass		454		gram

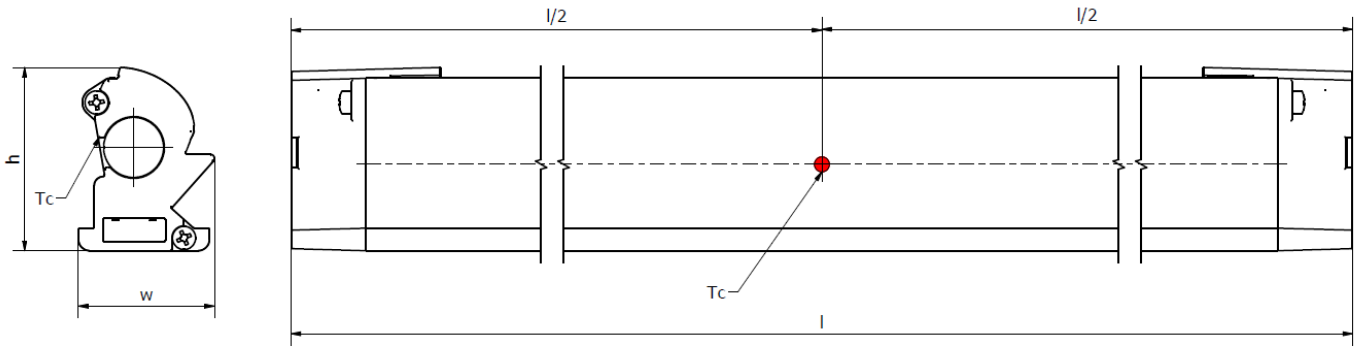
Thermal expansion from -30°C to +30°C is included in the tolerances



InteGrade F NB Va 1600mm 930 PW SD G4
InteGrade F NB Va 1600mm 940 PW SD G4

Parameter	Min	Typ	Max	Unit
Length	1596	1600	1604	mm
Width	17.7	18.2	18.7	mm
Height total	23.9	24.5	25.1	mm
Product mass		510		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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