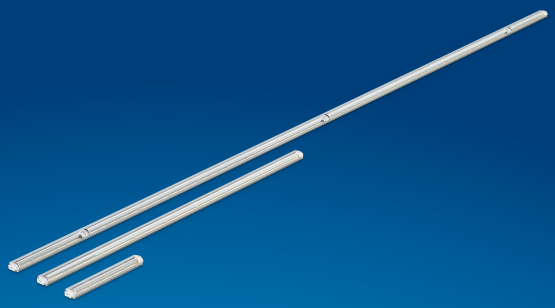
PHILIPS

InteGrade

LED

InteGrade engine NB value G3



Datasheet

InteGrade LED system

Compact linear LED lighting for ultimate shopping experience

Key features and benefits

- State-of-art Efficacy up to 112 lm/W
- Uniform light distribution due to its breakthrough optical design
- Natural merchandise color with specially formulated CRI90 LEDs
- Food version featuring a single color line of light
- Miniaturized slim design for aesthetic integration
- Continuous line of light to eliminate undesirable hot spots, glare, reflections
- Long life-time: >50,000 hours
- Maximum design flexibility with extensive range of engine lengths, color temperatures and accessories
- True System proposition with Xitanium Constant Voltage LED power drivers
- Five year system warranty
- Dimmable
- Start-up time / Warm-up time: instant start-up with full illumination

February 2019

direct

100%
instant

Ordering data

Commercial product name	EOC	12NC	Box quantity
InteGrade engine NB Va 140mm 930 G3	8718696 744314 00	9290 015 77006	24
InteGrade engine NB Va 140mm 940 G3	8718696 744338 00	9290 015 77306	24
InteGrade engine NB Va 140mm 956 G3	8718696 792230 00	9290 016 18706	24
InteGrade engine NB Va 140mm WWR G3	8718696 744352 00	9290 015 77606	24
InteGrade engine NB Va 575mm 930 G3	8718696 745816 00	9290 015 77106	24
InteGrade engine NB Va 575mm 940 G3	8718696 745830 00	9290 015 77406	24
InteGrade engine NB Va 575mm 956 G3	8718696 792254 00	9290 016 18806	24
InteGrade engine NB Va 575mm WWR G3	8718696 745854 00	9290 015 77706	24
InteGrade engine NB Va 1430mm 930 G3	8718696 746110 00	9290 015 77206	24
InteGrade engine NB Va 1430mm 940 G3	8718696 746134 00	9290 015 77506	24
InteGrade engine NB Va 1430mm 956 G3	8718696 792278 00	9290 016 18906	24
InteGrade engine NB Va 1430mm WWR G3	8718696 746158 00	9290 015 77806	24
InteGrade engine NB Va 1430mm XR G3	8718699 655112 00	9290 016 80506	24

Module temperatures

Parameter	Nominal*	Life**	Max***	Unit
T_a (ambient temperature)	5	30	30	°C

* Nominal value at which typical performance is specified

** Value at which life time is specified

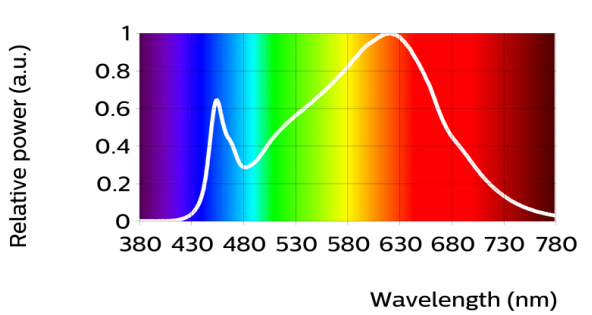
*** Maximum value for safe operation, do not operate above this value

Optical characteristics - table per color (CCT)

InteGrade engine NB Va 140mm 930 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	100	125	150	lm
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		26		deg
Photobiological safety			RG1 unlimited	

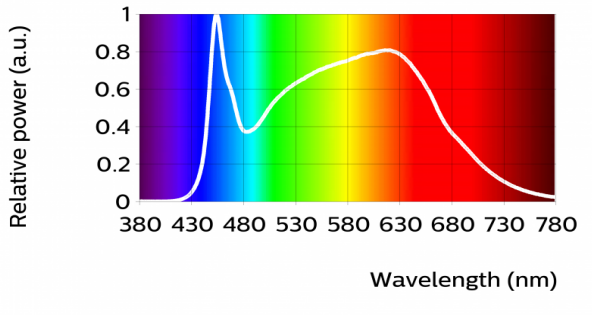
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Va 140mm 940 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	104	130	156	lm
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.383, 0.382)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		26		deg
Photobiological safety			RG1 unlimited	

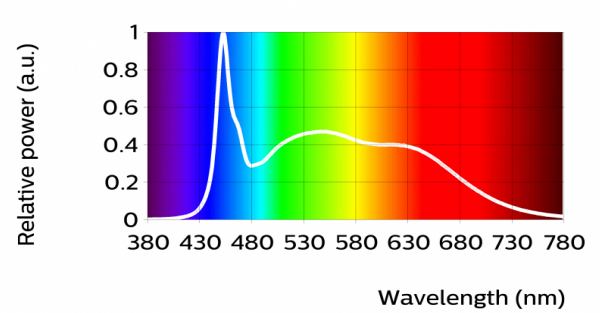
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Va 140mm 956 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	96	120	144	lm
Correlated color temperature (CCT)		5600		K
Color coordinates (CIEx, CIEy)		(0.334, 0.352)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		26		deg
Photobiological safety			RG1 unlimited	

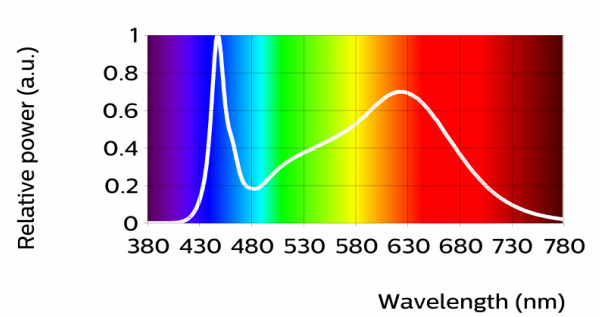
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Va 140mm WWR G3

Parameter	Min	Typ	Max	Unit
Luminous flux	100	125	150	lm
Color coordinates (CIEx, CIEy)		(0.387, 0.332)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		26		deg
Photobiological safety			RG1 unlimited	

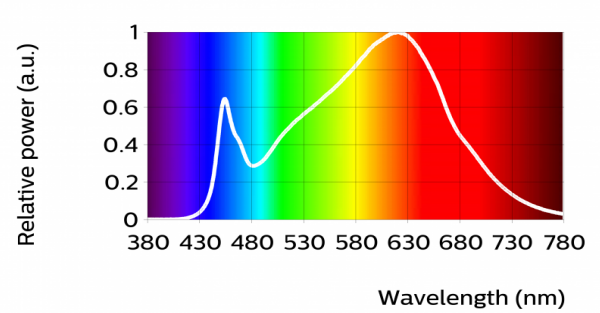
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Va 575mm 930 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	400	500	600	lm
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		26		deg
Photobiological safety			RG1 unlimited	

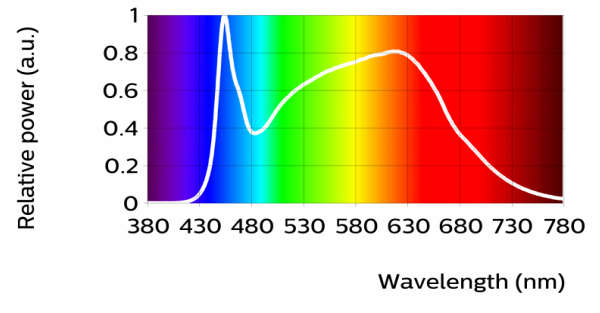
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Va 575mm 940 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	424	530	636	lm
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.383, 0.382)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		26		deg
Photobiological safety			RG1 unlimited	

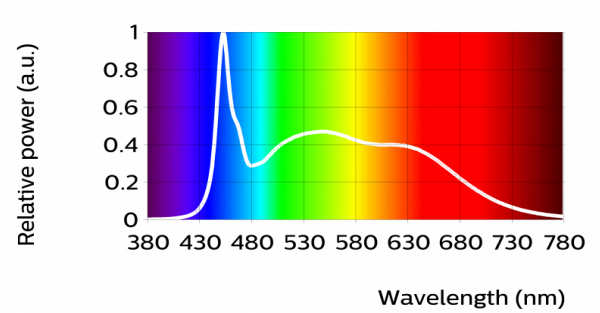
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Va 575mm 956 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	384	480	576	lm
Correlated color temperature (CCT)		5600		K
Color coordinates (CIEx, CIEy)		(0.334, 0.352)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		26		deg
Photobiological safety			RG1 unlimited	

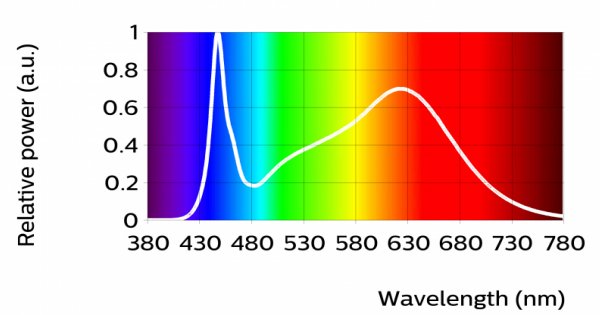
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Va 575mm WWR G3

Parameter	Min	Typ	Max	Unit
Luminous flux	400	500	600	lm
Color coordinates (CIEx, CIEy)		(0.387, 0.332)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		26		deg
Photobiological safety			RG1 unlimited	

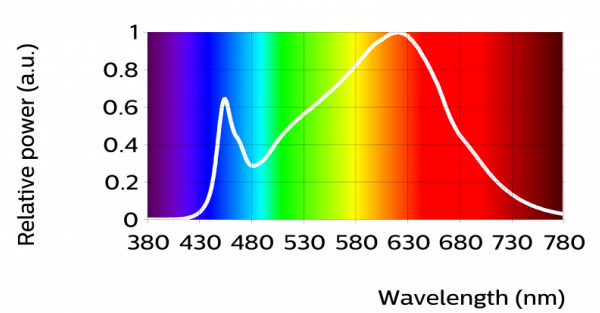
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Va 1430mm 930 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	984	1230	1476	lm
Correlated color temperature (CCT)		3000		K
Color coordinates (CIEx, CIEy)		(0.434, 0.403)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		26		deg
Photobiological safety			RG1 unlimited	

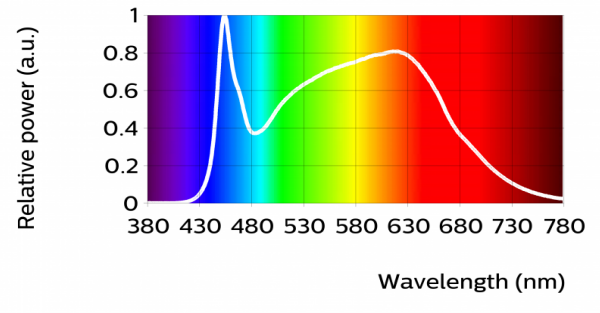
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Va 1430mm 940 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	1040	1300	1560	lm
Correlated color temperature (CCT)		4000		K
Color coordinates (CIEx, CIEy)		(0.383, 0.382)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		26		deg
Photobiological safety			RG1 unlimited	

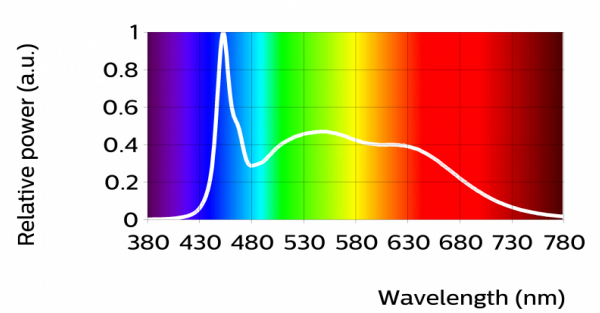
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Va 1430mm 956 G3

Parameter	Min	Typ	Max	Unit
Luminous flux	960	1200	1440	lm
Correlated color temperature (CCT)		5600		K
Color coordinates (CIEx, CIEy)		(0.334, 0.352)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		26		deg
Photobiological safety			RG1 unlimited	

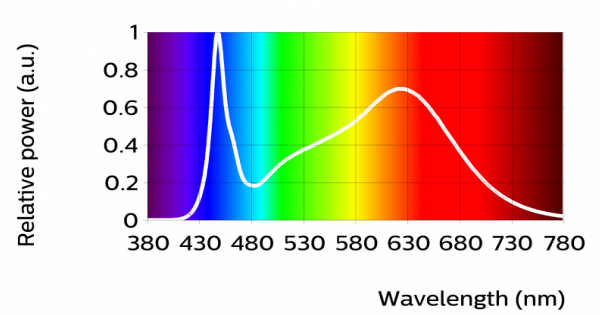
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



InteGrade engine NB Va 1430mm WWR G3

Parameter	Min	Typ	Max	Unit
Luminous flux	984	1230	1476	lm
Color coordinates (CIEx, CIEy)		(0.387, 0.332)		-
Color consistency			5	SDCM
CRI	90			
Radiation angle		26		deg
Photobiological safety			RG1 unlimited	

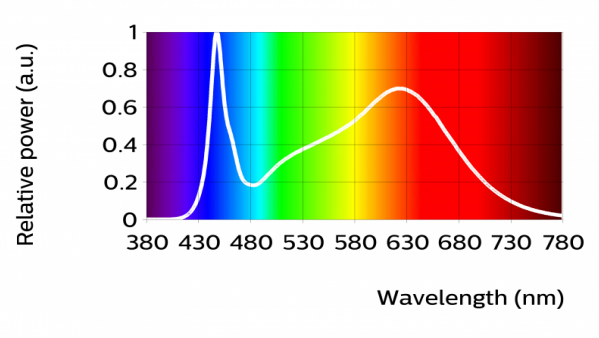
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



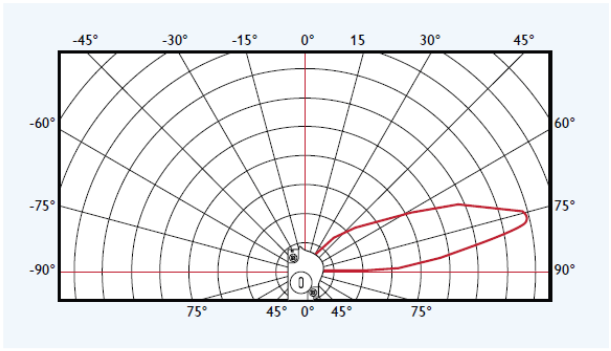
InteGrade engine NB Va 1430mm XR G3

Parameter	Min	Typ	Max	Unit
Luminous flux	860	1075	1290	lm
Color coordinates (CIEx, CIEy)		(0.461, 0.351)		-
Color consistency			5	SDCM
CRI	80			
Radiation angle		26		deg
Photobiological safety			RG1 unlimited	

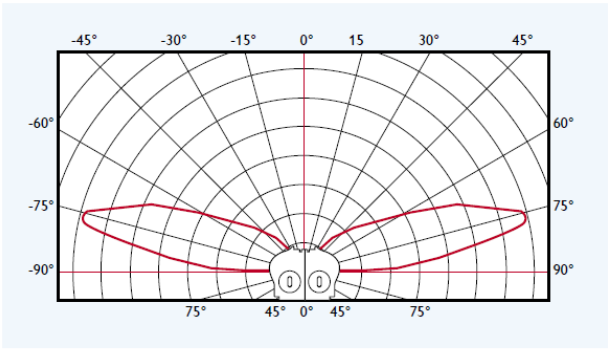
Measurement precision for flux +/- 5%, for efficacy +/- 6%., for x, y +/- 0.005, for CRI +/- 1.5



Beam shape



InterGrade LED fixture SD (for edges)



InterGrade LED fixture CTR (for center)

Electrical characteristics

InteGrade engine NB Va 140mm 930 G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		1.2		W = kWh/1000h
Number of modules in series per chain			40	
Measurement precision for power +/- 3.3%				

InteGrade engine NB Va 140mm 940 G3

Parameter	Min	Typ	Max	Unit
Power consumption		1.2		W = kWh/1000h
Number of modules in series per chain			40	

InteGrade engine NB Va 140mm 956 G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		1.1		W = kWh/1000h
Number of modules in series per chain			40	
Measurement precision for power +/- 3.3%				

InteGrade engine NB Va 140mm WWR G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		1.3		W = kWh/1000h
Number of modules in series per chain			40	
Measurement precision for power +/- 3.3%				

InteGrade engine NB Va 575mm 930 G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		4.8		W = kWh/1000h
Number of modules in series per chain			10	
Measurement precision for power +/- 3.3%				

InteGrade engine NB Va 575mm 940 G3

Parameter	Min	Typ	Max	Unit
Power consumption		4.8		W = kWh/1000h
Number of modules in series per chain			10	

InteGrade engine NB Va 575mm 956 G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		4.3		W = kWh/1000h
Number of modules in series per chain			10	
Measurement precision for power +/- 3.3%				

InteGrade engine NB Va 575mm WWR G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		5.2		W = kWh/1000h
Number of modules in series per chain			10	
Measurement precision for power +/- 3.3%				

InteGrade engine NB Va 1430mm 930 G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		11.9		W = kWh/1000h
Number of modules in series per chain			4	
Measurement precision for power +/- 3.3%				

InteGrade engine NB Va 1430mm 940 G3

Parameter	Min	Typ	Max	Unit
Power consumption		11.9		W = kWh/1000h
Number of modules in series per chain			4	

InteGrade engine NB Va 1430mm 956 G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		10.7		W = kWh/1000h
Number of modules in series per chain			4	
Measurement precision for power +/- 3.3%				

InteGrade engine NB Va 1430mm WWR G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		12.9		W = kWh/1000h
Number of modules in series per chain			4	
Measurement precision for power +/- 3.3%				

InteGrade engine NB Va 1430mm XR G3

Parameter	Min	Typ	Max	Unit
Forward voltage		24.0		V
Power consumption		12.8		W = kWh/1000h
Number of modules in series per chain			4	
Measurement precision for power +/- 3.3%				

Lumen maintenance

Operation point	Lumen maintenance x 1000 hours	L70			L80		
		B50	B20	B10	B50	B20	B10
	Ta -20°C	>75	>75	>75	>75	>75	>75
	Ta 5°C	>75	>75	>75	62	61	60
	Ta 30°C	73	71	70	45	44	44

Lifetime

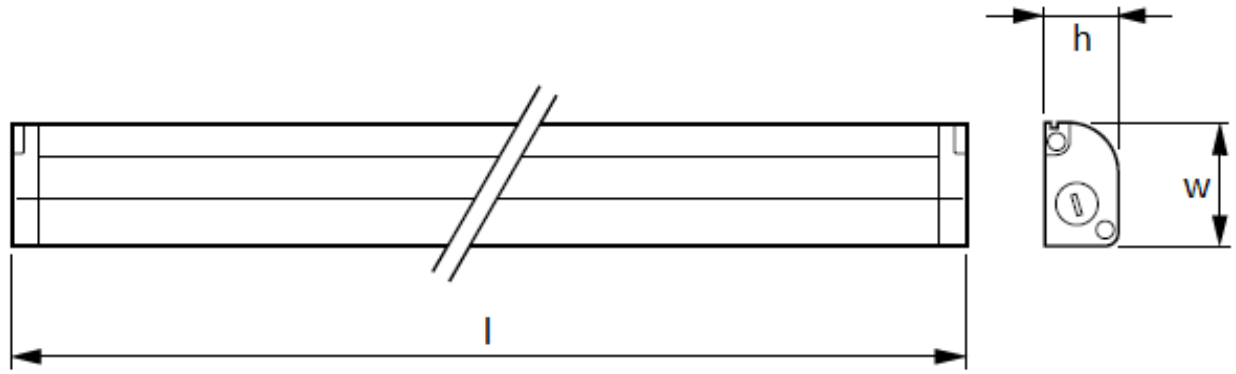
Parameter	Value	Unit
M70F50 nominal	100000	hours
M70F50 life	74000	hours

Switching cycles in accordance to EU 1194/2012: >15000

Mechanical characteristics

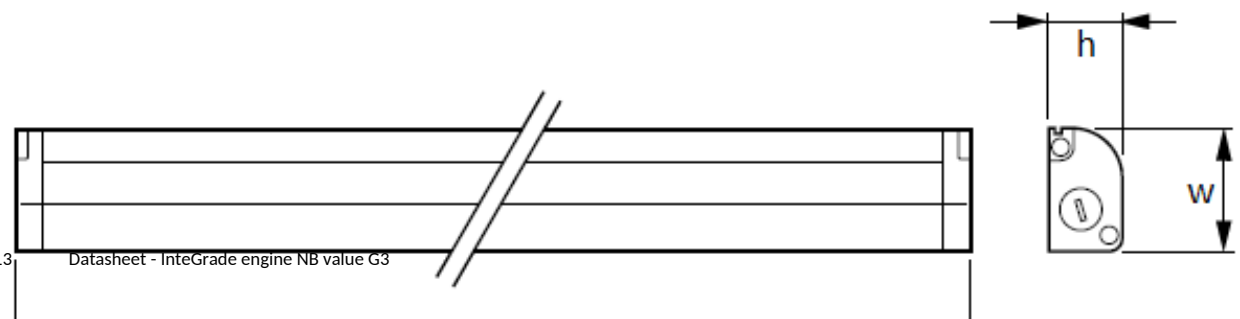
InteGrade engine NB Va 140mm 930 G3
InteGrade engine NB Va 140mm 940 G3
InteGrade engine NB Va 140mm 956 G3
InteGrade engine NB Va 140mm WWR G3

Parameter	Min	Typ	Max	Unit
Length	136	140	144	mm
Width	18.2	18.5	18.7	mm
Height	10.5	11	13.5	mm
Product mass		30		gram



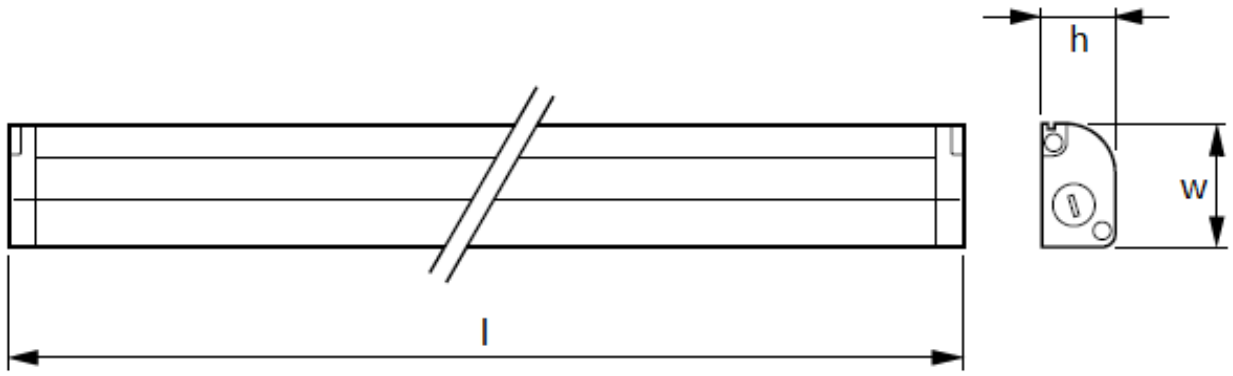
InteGrade engine NB Va 575mm 930 G3
InteGrade engine NB Va 575mm 940 G3
InteGrade engine NB Va 575mm 956 G3
InteGrade engine NB Va 575mm WWR G3

Parameter	Min	Typ	Max	Unit
Length	571	575	579	mm
Width	18.2	18.5	18.7	mm
Height	10.5	11	13.5	mm
Product mass		140		gram



InteGrade engine NB Va 1430mm 930 G3
InteGrade engine NB Va 1430mm 940 G3
InteGrade engine NB Va 1430mm 956 G3
InteGrade engine NB Va 1430mm WWR G3
InteGrade engine NB Va 1430mm XR G3

Parameter	Min	Typ	Max	Unit
Length	1426	1430	1434	mm
Width	18.2	18.5	18.7	mm
Height	10.5	11	13.5	mm
Product mass		307		gram



Absolute ratings

Parameter	Min	Max	Unit
ESD (direct contact)		4	kV
ESD (air)		8	kV
Ambient temperature	-30	30	°C
Storage temperature	-30	60	°C

Application information

Certificates and Standards
IEC/EN 62031
IEC/EN 62471
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.9
UL 2108
NSF (allows usage in the vicinity of Food)

Environmental
RoHS/REACH

Application	
IP rating	No IP-rating, fit for use in coolers and freezers
Overheating protection	No protection
Luminaire class	IEC Class III if connected to a SELV driver
Dimming	Yes

The InteGrade system is certified with the household standard compliant SELV Philips LED Power drivers

Notes

Special colors; Modules with WWR and XR color are special purpose modules for refrigerated cabinets, not for general lighting.

11/02/2019

www.philips.com/oem