PRL SERIES

Line lights projectors

High intensity LED projectors which produce a line of intensive and narrow light. Specially designed for obtaining the ideal light for linear cameras. Otherwise, with matricial cameras, allow darkfield lighting (highlighting the small reliefs and cracks) in large areas or long distances.

▶ **Technical specifications[1]**

Lighting model	PRLnn00B*
Dimensions	**Length (L)** = (nn x 201) + 6 **Width** = 35
Active surface	**Length (L)** = (nn x 201)
RWD (mm)	**F1** = 50mm **F2** = 150mm **F3** = infinite
Focal length	Identified as modifier. /F1 focal length by default. Select another focal length or diffuse emission to change it.
Weight (g)	66 + (584,5 x nn)
IP rating	IP40
Mounting holes	nn x M4x0.7↧
Connection *(Type C)*	BN = +24V ±3% BU = 0V
Power cable	Pre-cabled with flying leads 2x1mm² Length=1.8m
Modifiers[2]	f1 f2 f3 ↑D PNP
Accessories[3]	🔗
iBlueDrive tech.	N/A

(*) Customizable lighting system composed by segments of 201mm of light emission window. The required length for each application is assembled from manufacture preserving light homogeneity. The lighting model name will depend on the number of segments and will be composed as it is shown in the table below:

Lighting model	nn	L = nn x 201 (Length)
PRL0200B	**02**	201
PRL0400B	**04**	402
PRLnn00B	**nn**	(nn x 201)
PRL3000B	**30**	3015

▶ **Instantaneous consumption[4] (max.)**

*WT

Lighting model		PRLnn00B*	
TYPE C 24VDC	**B**	30W x nn	-470C
	G	30W x nn	-525C
	R	22W x nn	-630C
	I	18W x nn	-850C
	W	30W x nn	-W00C
TYPE P		No 'Type P' standard LED lighting systems in this series	
TYPE S		No 'Type S' standard LED lighting systems in this series	
TYPE i		No 'Type i' standard LED lighting systems in this series	

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(1) Environmental specifications and iconography legend in additional annex Z1.4 and Z2 respectively.
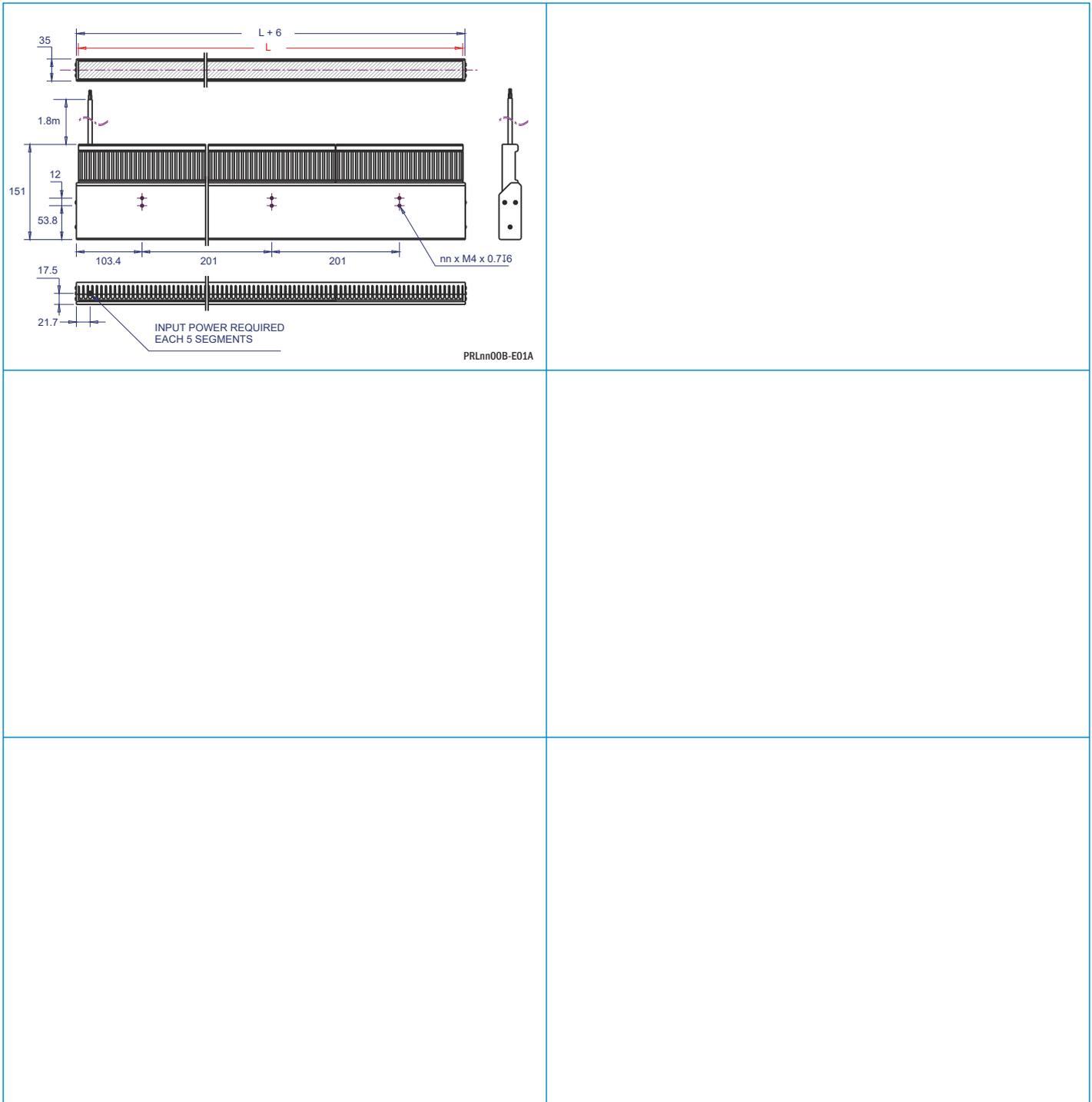
(2) Focal Lengths or diffuse emission of PRL series projectors, identified as modifiers. If not indicated, default modifier will be /F1. Please, consult the code to select a different one before ordering (additional annex Z2.1).

(3) Accessories are not-included. More information in accessories section.
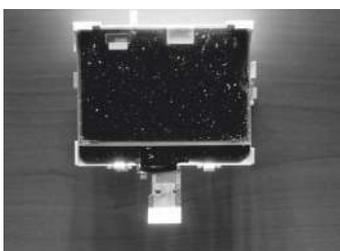
(4) Bear in mind that consumption table is only to be used as a guide. To refer to real values, please, consult product label when purchasing.
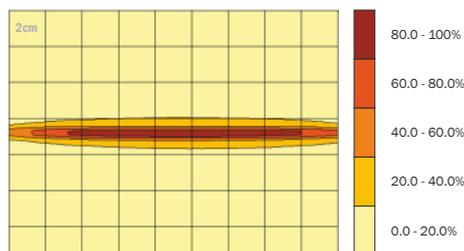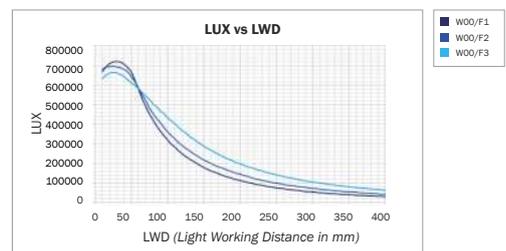
*ORDER REFERENCE = Lighting model + WT / MODIFIERS

DCM sistemes

PRL SERIES

L + 6
L
35
1.8m
12
151
53.8
103.4
201
201
nn x M4 x 0.7Ī6
17.5
21.7

INPUT POWER REQUIRED
EACH 5 SEGMENTS

PRLnn00B-E01A

All units in millimeters, if not indicated.

Example of PRL captured image

2cm

80.0 - 100%
60.0 - 80.0%
40.0 - 60.0%
20.0 - 40.0%
0.0 - 20.0%

Brightness distribution of PRL0200B-W00C/F1@50mm

LUX vs LWD

LUX

800000
700000
600000
500000
400000
300000
200000
100000
0

0   50   100 150 200 250 300 350 400

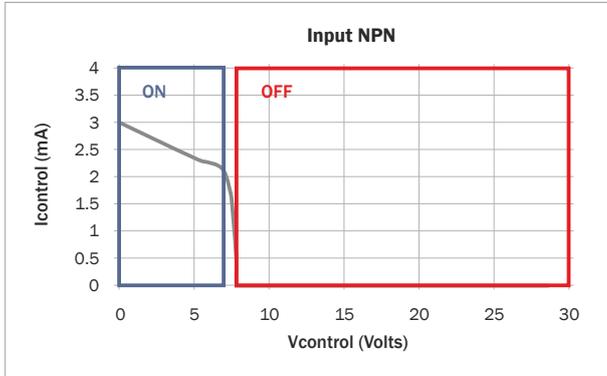LWD *(Light Working Distance in mm)*
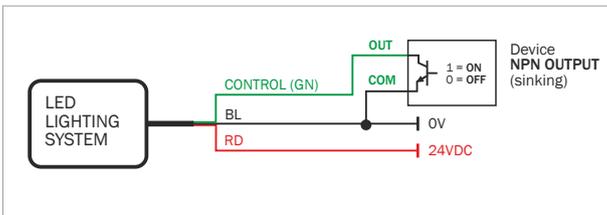
W00/F1
W00/F2
W00/F3

PRL0200B-W00C light intensity.

▶ **Z1.1 - Control input NPN/PNP for 'Type C' lighting systems of DOL, PLA (PLA0513A and PLA1026A), PLC, PRC (PRC0604C and PRC0606B), PRH and PRK series.**

■ **NPN model (by default)**

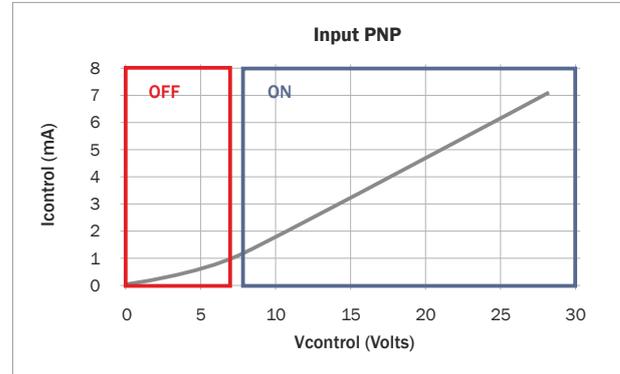*NPN chart of Vcontrol (Volts) vs Icontrol (mA)*
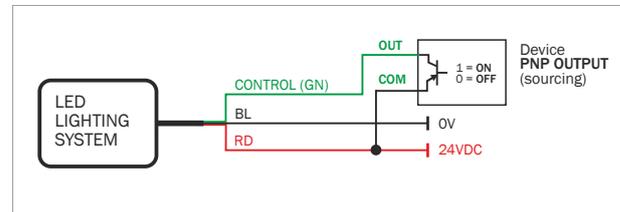

NPN wiring for ON/OFF mode

Electrical specifications

0V to +6.8V	Light ON
+7.2V to +24V	Light OFF
Working conditions	25ºC, VIN = 24V
Connection	Direct to a NPN output
Delay from OFF to ON state	<5 µs
Delay from ON to OFF state	<5 µs
Bias voltage in control input	7.9V
Input impedance	7K9 Ω

■ **PNP model (lighting systems with PNP modifier =/P)**

PNP chart of Vcontrol (Volts) vs Icontrol (mA)

PNP wiring for ON/OFF mode

Electrical specifications

0V to +6.8V	Light OFF
+7.2V to +24V	Light ON
Working conditions	25ºC, VIN = 24V
Connection	Direct to a PNP output
Delay from OFF to ON state	<5 µs
Delay from ON to OFF state	<5 µs
Bias voltage in control input	0V
Input impedance	4K Ω
Compliance	IEC1131-2 Type 1, 2 and 3

▶ Z3.1 - Environmental Specifications

Max. Operating Humidity	85% non-condensing
Operating Temperature	0 - 40ºC
Storage Temperature	0 - 60ºC
Housing material	Anodized aluminium
Standards	CE ⊠ RoHS COMPLIANT

▶ Z3.2 - Modifiers legend

icon	Description	Code
∠N	Narrow angle of emission	/AN
∠M	Medium angle of emission *(default)*	/AM
∠W	Wide angle of emission	/AW
∠O	Oval angle of emission = 23-24° (x) / 17-18° (y)	/AO
↕D	Diffuse emission	/AD
⤢	Polarizer filter	/FPL
⤢	Diffuser filter	/FDR
H	Backlight hole of 42mm	/H
H1	Backlight hole of 65mm	/H1
CC1	Dome hole of 46mm	/CC1
CC2	Dome hole of 40mm	/CC2
Ipxx	IP Rating = IPxx = Ip65 / IP67	/65 /67
PNP	PNP input model	/P
f1	50mm focal Length	/F1
f2	150mm focal Length	/F2
f3	Infinite focal Length	/F3
XS	Lighting by sectors = 2 or 4 sectors	/2S /4S

▶ Z3.3 - Accessories legend

icon	Description	Serie
⟳	Power cable/s	VCB, VCC, VCD Series
⟳	Other cable/s	VCU, VCL
⫿⫿	Strobe and RGB controller/s	VST, VSC Series
⤢	Polarizer filter	VPF, VPC
⤢	Diffuser filter	VDF
⤢	Collimater filter on **x** axis	VCFx
⤢	Collimater filter on **y** axis	VCFy
⤢	Collimater filter on **xy** axis	VCFxy
⤢	Darkfield converter	VRF
🛡	Protector filter	VPT
❄	Heat dissipator	VHD
⚙	Fixing bracket	VBA, VBB, VBC Series

▶ Z3.4 - Technical drawings legend

icon	Description
✕	Optical axis
↗	Viewing window dimensions
—	Lighting elements
✛	Light emission center
↗	Lighting surface dimensions

▶ Z3.5 - Colours & Wavelegths legend

icon	Wavelength	Colour	Code
U	365nm	UV-	-365
U	400nm	UV	-400
B	470nm	BLUE	-470
G	525nm	GREEN	-525
R	630nm	RED	-630
I	850nm/880nm	IR	-850/-880
W		WHITE	-W00
●		RGB	-RGB

▶ Z3.6 - Types of lighting legend

icon	Description
	Radial lighting
	'Darkfield' lighting effect. Low angle illumination
	Backlight illumination
	'Cloudy day' lighting effect
	'Bright field' lighting effect
	Projector lighting
	Axial lighting

▶ Z3.7 - Types of light legend

icon	Description
↗	Direct light
↗	Diffuse light
↗	Ultra-diffuse light

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