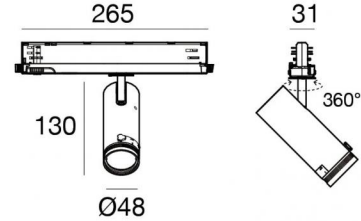




Projectors | 176-264 V
1 arrayLED 13 W DC - 15.5 W AC | CRI 90
81988N85



Technical data	
Type	Track
Installation position	Ceiling
Installation environment	Indoor
Light Source	LED
Circuit structure	arrayLED
Optics	Adjustable Focus
Light emission direction	frontal
Nominal power	13 W DC
Total Power	15.5 W
Source lumens	1863 lm
Nominal input voltage	220 - 240 V AC
Input voltage range	176 - 264 V AC
Frequency	50 - 60 Hz
CCT / Tone	4000 K
Colour rendering index	90 Ra
C.C. / C.V.	AC
Safety class	2
IP	IP20
Glow wire test	850°
Direct mounting on normally flammable surfaces	Yes
CE	Yes
Driver included	Driver
Dimmable article	DALI-2 - PUSH DIM
Directional	Swivelling
total angle (vertical plane)	90 °
total angle (horizontal plane)	360 °
Tilting	No
Walk-over	No
Drive-over	No
Cable included	No
Resin potting	No
Type of light emission	Single emission
Net weight	0.390 Kg
Electrostatic discharge protection	Yes
Surge protection	2 KV
Optics technology	Anti - Glare

Finishing casing	
Material	Die-cast Aluminium EN AB - 46100
Colour	Black
Processing	Powder coating



Projectors | 176-264 V | 1 arrayLED 13 W DC - 15.5 W AC | CRI 90 | Angle Max
81988N85

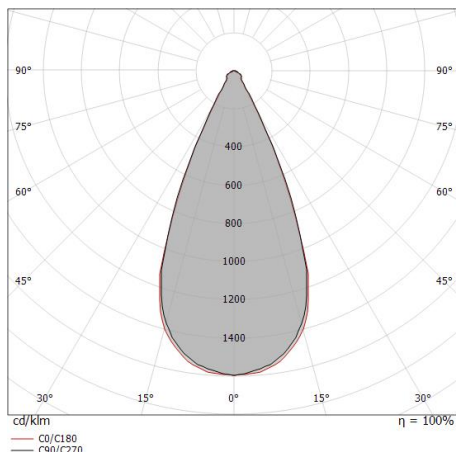
Single emission projectors for indoor application. The natural white LED light source with a adjustable focus light distribution is composed of 1 arrayed LEDs with CCT of 4000 K and a CRI 90; the source luminous flux is 1863 lm, with a 143.3 lm/W nominal luminous efficacy.

The device body is made of die-cast aluminium en ab - 46100 and features a black finish, processed by means of powder coating. The ingress protection degree is IP20; the total weight is of 0.390 kg.

The total absorbed power is 15.5 W.

The device features protection class II and can be ceiling-mounted.

Compliant with the EN 60598-1 standard and its specific provisions.



Distance [m]	Cone diameter [m]	illuminance [lx]
0.5	0.43 0.43	E(0°) 3275 E(C90) 1274 E(C0) 1278
1.0	0.86 0.85	E(0°) 819 E(C90) 318 E(C0) 320
1.5	1.29 1.28	E(0°) 364 E(C90) 142 E(C0) 142
2.0	1.72 1.71	E(0°) 205 E(C90) 80 E(C0) 80
2.5	2.15 2.13	E(0°) 131 E(C90) 51 E(C0) 51
3.0	2.58 2.56	E(0°) 91 E(C90) 35 E(C0) 36

— C0/C180 (Half-peak divergence: 46.2°)
— C90/C270 (Half-peak divergence: 46.6°)

Energy efficiency class

This product contains a light source of energy efficiency class E.

Illuminotechnical Features

Light Output Ratio (LOR)	27 %
Source lumens	1863 lm
Delivered lumens	514 lm
Consumption	15.5 W
Luminaire efficacy	33 lm/W
Colour temperature	4000 K
Standard Deviation of Colour Matching	2 Step MacAdam
Colour rendering index	90 Ra
Colour Rendering Index	60 R9
Black Body Locus	On
Standard Operating Ambient Temperature	-20 / +50°C
Ordinary temperature on the glass	40°C

LED Life / Failure Ratio

L70 B10 C0 252000h (at Tj 65 Ta 25)

UGR

UGR axial	23.1
UGR transversal	22.9
X=4H Y=8H	S=0.25H
Reflection factor	70/50/20

OPTICAL

C0/C180 optics	46°
Light distribution simmetry	Symmetrical

COLOR VECTOR GRAPHIC





Projectors | 176-264 V | 1 arrayLED 13 W DC - 15.5 W AC | CRI 90 | Angle Min

81988N85

Single emission projectors for indoor application. The natural white LED light source with a adjustable focus light distribution is composed of 1 arrayed LEDs with CCT of 4000 K and a CRI 90; the source luminous flux is 1863 lm, with a 143.3 lm/W nominal luminous efficacy.

The device body is made of die-cast aluminium en ab - 46100 and features a black finish, processed by means of powder coating. The ingress protection degree is IP20; the total weight is of 0.390 kg.

The total absorbed power is 15.5 W.

The device features protection class II and can be ceiling-mounted.

Compliant with the EN 60598-1 standard and its specific provisions.

Energy efficiency class

This product contains a light source of energy efficiency class E.

Illuminotechnical Features

Light Output Ratio (LOR)	11 %
Source lumens	1863 lm
Delivered lumens	223 lm
Consumption	15.5 W
Luminaire efficacy	14 lm/W
Colour temperature	4000 K
Standard Deviation of Colour Matching	2 Step MacAdam
Colour rendering index	90 Ra
Colour Rendering Index	60 R9
Black Body Locus	On
Standard Operating Ambient Temperature	-20 / +50°C
Ordinary temperature on the glass	40°C

LED Life / Failure Ratio

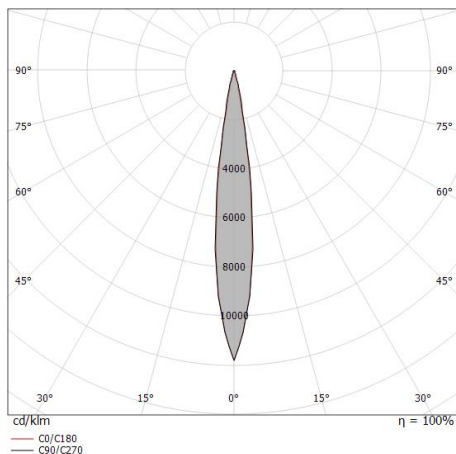
L70 B10 C0 252000h (at Tj 65 Ta 25)

UGR

UGR axial	16.9
UGR transversal	16.2
X=4H Y=8H	S=0.25H
Reflection factor	70/50/20

OPTICAL

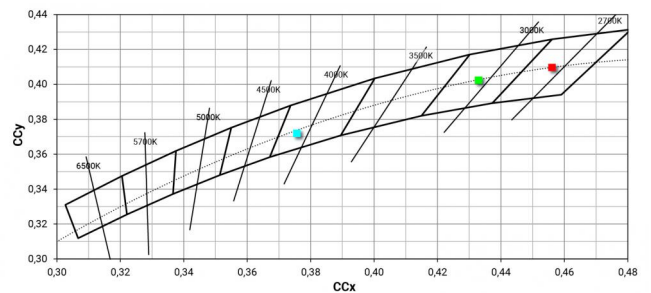
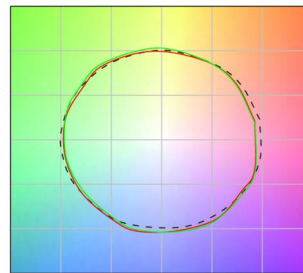
C0/C180 optics	14°
Light distribution simmetry	Symmetrical

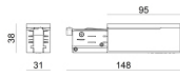


Distance [m]	Cone diameter [m]	Illuminance [lx]
0.5	0.13 0.12	E(0°) 10493 E(C90) 7.2° 5165 E(C0) 7.0° 5157
1.0	0.25 0.25	E(0°) 2623 E(C90) 7.2° 1291 E(C0) 7.0° 1289
1.5	0.38 0.37	E(0°) 1166 E(C90) 7.2° 574 E(C0) 7.0° 573
2.0	0.51 0.48	E(0°) 656 E(C90) 7.2° 323 E(C0) 7.0° 322
2.5	0.63 0.61	E(0°) 420 E(C90) 7.2° 207 E(C0) 7.0° 206
3.0	0.76 0.74	E(0°) 291 E(C90) 7.2° 143 E(C0) 7.0° 143

— C0/C180 (Half-peak divergence: 14.0°)
— C90/C270 (Half-peak divergence: 14.4°)

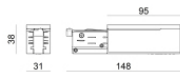
COLOR VECTOR GRAPHIC





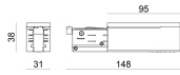
Power supply - White Right power supply header (9001/W)
 Material:PC, colour:white.

Code
81033



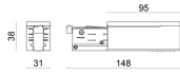
Power supply - White left power supply header (9002/W)
 Material:PC, colour:white.

Code
81036



Power supply - Black left power supply header (9002/B)
 Material:PC, colour:black.

Code
81037



Power supply - Black Right power supply header (9001/B)
 Material:PC, colour:black.

Code
81034



Closing cap - White end cap 9004/W
 Material:PC, colour:white.

Code
80999



Closing cap - Black end cap 9004/B
 Material:PC, colour:black.

Code
81000



Closing cap - Recessed white end cap 9004-R/W
 Material:PC, colour:white.

Code
81002



Closing cap - Recessed black end cap 9004-R/B
 Material:PC, colour:black.

Code
81003



Closing cap - White gasket (S-9001/115-W)
Material:white.

Code
81084



Closing cap - Black gasket (S-9001/115-B)
Material:black, colour:black.

Code
81085



Ceiling rose - 1.5m white pendant luminaire kit + bracket (9000-KIT5-1,5-W)
Material:plastic, colour:white.

Code
81012



Ceiling rose - 1.5m black pendant luminaire kit + bracket ((9000-KIT5-1,5-B)
Material:plastic, colour:black.

Code
81014



Ceiling rose - 5m white pendant luminaire kit + bracket (9000-KIT5-5-W)
Material:plastic, colour:white.

Code
81013



Ceiling rose - 5m black pendant luminaire kit + bracket (9000-KIT5-5-B)
Material:plastic, colour:black.

Code
81015



Bracket - Anodized fixing bracket (S-9000/131)
L=35mm, H=14mm, D=24mm.
Material:Aluminium, colour:translucent.

Finish **Code**
Anod. Al. 81086



Bracket - Anodized stiffening bracket (S-9000/333)
L=180mm, H=24mm, D=26mm.

Material:Aluminium, colour:Anodised Aluminum, processing:Anodisation.

Finish **Code**
Anod. Al. 81024



		<p>Bracket - White stiffening bracket (S-9000/333-W) L=180mm, H=24mm, D=20mm. Material:Aluminium, colour:white RAL 9010, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>81025</td> </tr> </tbody> </table>	Finish	Code	White	81025
Finish	Code						
White	81025						
		<p>Bracket - Black stiffening bracket (S-9000/333-B) L=180mm, H=24mm, D=20mm. Material:Aluminium, colour:black RAL 9005, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td>81026</td> </tr> </tbody> </table>	Finish	Code	Black	81026
Finish	Code						
Black	81026						
		<p>Bracket - White fixing bracket (S-9000/131-W) L=35mm, H=14mm, D=24mm. Material:Aluminium, colour:white, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>81087</td> </tr> </tbody> </table>	Finish	Code	White	81087
Finish	Code						
White	81087						
		<p>Bracket - Black fixing bracket (S-9000/131-B) L=35mm, H=14mm, D=24mm. Material:Aluminium, colour:Black, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td>81088</td> </tr> </tbody> </table>	Finish	Code	Black	81088
Finish	Code						
Black	81088						
		<p>Junction - White electrical junction - internal (9003/W) Type linear. Material:PC, colour:white.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>81039</td> </tr> </tbody> </table>	Finish	Code	White	81039
Finish	Code						
White	81039						
		<p>Junction - Black electrical junction - internal (9003/B) Type linear. Material:PC, colour:black.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td>81040</td> </tr> </tbody> </table>	Finish	Code	Black	81040
Finish	Code						
Black	81040						
		<p>Junction - White power supply junction - central (9010/W) Type linear. Material:PC, colour:white.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>81042</td> </tr> </tbody> </table>	Finish	Code	White	81042
Finish	Code						
White	81042						
		<p>Junction - White L junction - internal (9011/W) Type linear. Material:PC, colour:white.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>81045</td> </tr> </tbody> </table>	Finish	Code	White	81045
Finish	Code						
White	81045						



		<p>Junction - White L junction - external (9012/W) Type linear. Material:PC, colour:white.</p>	<p>Finish White</p>	<p>Code 81048</p>
		<p>Junction - Flexible white junction (9018/W) Type flexible curve. Material:PC, colour:white.</p>	<p>Finish White</p>	<p>Code 81066</p>
		<p>Junction - White X junction (9017/W) Type linear. Material:PC, colour:white.</p>	<p>Finish White</p>	<p>Code 81063</p>
		<p>Junction - Left white T junction - external (9013/W) Type linear. Material:PC, colour:white.</p>	<p>Finish White</p>	<p>Code 81051</p>
		<p>Junction - Right white T junction - external (9014/W) Type linear. Material:PC, colour:white.</p>	<p>Finish White</p>	<p>Code 81054</p>
		<p>Junction - Left white T junction - internal (9015/W) Type linear. Material:PC, colour:white.</p>	<p>Finish White</p>	<p>Code 81057</p>
		<p>Junction - Right White T junction - internal (9016/W) Type linear. Material:PC, colour:white.</p>	<p>Finish White</p>	<p>Code 81060</p>
		<p>Junction - Black power supply junction - centrale (9010/B) Type linear. Material:PC, colour:black.</p>	<p>Finish Black</p>	<p>Code 81043</p>



		<p>Junction - Black L junction - internal (9011/B) Type linear. Material:PC, colour:black.</p>	<p>Finish Black</p>	<p>Code 81046</p>
		<p>Junction - Black L junction - external (9012/B) Type linear. Material:PC, colour:black.</p>	<p>Finish Black</p>	<p>Code 81049</p>
		<p>Junction - Flexible black junction (9018/B) Type flexible curve. Material:PC, colour:black.</p>	<p>Finish Black</p>	<p>Code 81067</p>
		<p>Junction - Black X junction (9017/B) Type linear. Material:PC, colour:black.</p>	<p>Finish Black</p>	<p>Code 81064</p>
		<p>Junction - Black left T junction - external (9013/B) Type linear. Material:PC, colour:black.</p>	<p>Finish Black</p>	<p>Code 81052</p>
		<p>Junction - Right black T junction - external (9014/B) Type linear. Material:PC, colour:black.</p>	<p>Finish Black</p>	<p>Code 81055</p>
		<p>Junction - Left black T junction - internal (9015/B) Type linear. Material:PC, colour:black.</p>	<p>Finish Black</p>	<p>Code 81058</p>
		<p>Junction - Right black T junction - internal (9016/B) Type linear. Material:PC, colour:black.</p>	<p>Finish Black</p>	<p>Code 81061</p>



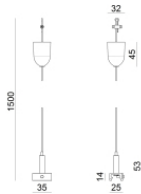
Suspensions - 1.5m white pendant luminaires kit (9000-KIT3-1,5-W)
Material:plastic, colour:white.

Code
81006



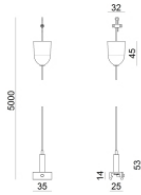
Suspensions - 5m white pendant luminaires kit (9000-KIT3-5-W)
Material:plastic, colour:white.

Code
81007



Suspensions - 1.5m black pendant luminaires kit (9000-KIT3-1,5-B)
Material:plastic, colour:black.

Code
81008



Suspensions - 5m black pendant luminaires kit (9000-KIT3-5-B)
Material:plastic, colour:black.

Code
81009



Suspensions - White rigid suspension clip (S-9000-P2-W)
Material:plastic, colour:white.

Code
81018



Suspensions - Black rigid suspension clip (S-9000-P2-B)
Material:plastic, colour:black.

Code
81019



Suspensions - White rigid suspension 1m (S-9000-P3-W)
Material:plastic, colour:white.

Code
81021



Suspensions - Black rigid suspension 1m (S-9000-P3-B)
Material:plastic, colour:black.

Code
81022



		<p>Cable cover - White recessed cover (S-9001-R/6-W) Material:PC, colour:white.</p>	<p>Code <u>81069</u></p>
		<p>Cable cover - White cover for recessed junction (S-9010-R/6-W) Material:PC, colour:white.</p>	<p>Code <u>81072</u></p>
		<p>Cable cover - White cover for recessed L junction (S-9011-R/6-W) Material:PC, colour:white.</p>	<p>Code <u>81075</u></p>
		<p>Cable cover - White cover for recessed T junction (S-9013-R/6-W) Material:PC, colour:white.</p>	<p>Code <u>81078</u></p>
		<p>Cable cover - White cover for recessed X junction (S-9017-R/6-W) Material:PC, colour:white.</p>	<p>Code <u>81081</u></p>
		<p>Cable cover - Black recessed cover (S-9001-R/6-B) Material:PC, colour:black.</p>	<p>Code <u>81070</u></p>
		<p>Cable cover - Black cover for recessed junction (S-9010-R/6-B) Material:PC, colour:black.</p>	<p>Code <u>81073</u></p>
		<p>Cable cover Material:PC, colour:black.</p>	<p>Code <u>81076</u></p>



		<p>Cable cover - Black cover for recessed T junction (S-9013-R/6-B) Material:PC, colour:black.</p>	<p>Code <u>81079</u></p>
		<p>Cable cover - Black cover for recessed X junction (S-9017-R/6-B) Material:PC, colour:black.</p>	<p>Code <u>81082</u></p>
		<p>Cable cover Material:white.</p>	<p>Code <u>83249</u></p>
		<p>Cable cover Material:black, colour:black.</p>	<p>Code <u>83250</u></p>
		<p>White three-phase/DALI adapter (9009/W)</p>	<p>Code <u>81094</u></p>
		<p>White three-phase adapter (9009-4/W)</p>	<p>Code <u>81091</u></p>
		<p>Black three-phase/DALI adapter (9009/B)</p>	<p>Code <u>81095</u></p>
		<p>Black three-phase adapter (9009-4/B)</p>	<p>Code <u>81093</u></p>



	Tool - Cutter S-9000/T	Code		
		81005		
		Track - Three-phase Recessed White DALI Track, 1 m (9000-1/W-R) Length: 1000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.	Finish	Code
			White	80990
		Track - Three-phase Recessed White DALI Track, 2 m (9000-2/W-R) Length: 2000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.	Finish	Code
			White	80991
		Track - Three-phase Recessed White DALI Track, 3 m (9000-3/W-R) Length: 3000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.	Finish	Code
			White	80992
		Track - Three-phase Recessed Grey DALI Track, 1 m (9000-1/B-R) Length: 1000mm; Type of track: Standard. Material:Aluminium, colour:Black, processing:Coating.	Finish	Code
			Black	80993
		Track - Three-phase Recessed Black DALI Track, 2 m (9000-1/B-R) Length: 2000mm; Type of track: Standard. Material:Aluminium, colour:Black, processing:Coating.	Finish	Code
			Black	80994
		Track - Three-phase Recessed Black DALI Track, 3 m (9000-3/B-R) Length: 3000mm; Type of track: Standard. Material:Aluminium, colour:Black, processing:Coating.	Finish	Code
			Black	80995
		Track Length: 1000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.	Finish	Code
			White	83336



		<p>Track Length: 2000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>83337</td> </tr> </tbody> </table>	Finish	Code	White	83337
Finish	Code						
White	83337						
		<p>Track Length: 3000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>83338</td> </tr> </tbody> </table>	Finish	Code	White	83338
Finish	Code						
White	83338						
		<p>Track Length: 1000mm; Type of track: Standard. Material:Aluminium, colour:Black, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td>83339</td> </tr> </tbody> </table>	Finish	Code	Black	83339
Finish	Code						
Black	83339						
		<p>Track Length: 2000mm; Type of track: Standard. Material:Aluminium, colour:Black, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td>83340</td> </tr> </tbody> </table>	Finish	Code	Black	83340
Finish	Code						
Black	83340						
		<p>Track Length: 3000mm; Type of track: Standard. Material:Aluminium, colour:Black, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td>83341</td> </tr> </tbody> </table>	Finish	Code	Black	83341
Finish	Code						
Black	83341						
		<p>Electronic accessory - TWIL-DALI controller for devices with DALI protocol installed on three-phase track. installation position: ceiling L=90mm, H=124mm, D=45mm. Material:ABS Plastic, colour:black.</p>	<table border="1"> <thead> <tr> <th>Code</th> </tr> </thead> <tbody> <tr> <td>C-E700008</td> </tr> </tbody> </table>	Code	C-E700008		
Code							
C-E700008							