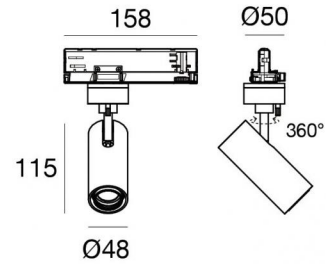




Projectors | 198-264 V
1 arrayLED 13 W DC - 15.5 W AC | CRI 90
82228M60



Technical data

Type	Track
Installation position	Ceiling
Installation environment	Indoor
Light Source	LED
Circuit structure	arrayLED
Optics	Medium Wide Flood
Light emission direction	frontal
Nominal power	13 W DC
Total Power	15.5 W
Source lumens	1487 lm
Nominal input voltage	220 - 240 V AC
Input voltage range	198 - 264 V AC
Frequency	50 - 60 Hz
CCT / Tone	2700 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	Dimming on Board
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	0.39 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 | 198-264 V | 1 arrayLED 13 W DC - 15.5 W AC | CRI 90 | Base
82228M60

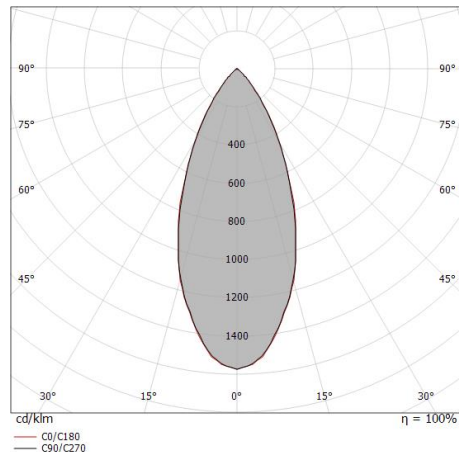
Single emission projectors for indoor application. The super warm white LED light source with a medium wide flood light distribution is composed of 1 arrayed LEDs with CCT of 2700 K and a CRI 90; the source luminous flux is 1487 lm, with a 114.4 lm/W nominal luminous efficacy.

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 0.39 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	0.40 0.41	E(0°) 5825 E(C90) 2335 E(C0) 2313
1.0	0.81 0.83	E(0°) 1456 E(C90) 584 E(C0) 578
1.5	1.21 1.24	E(0°) 647 E(C90) 259 E(C0) 257
2.0	1.62 1.66	E(0°) 364 E(C90) 146 E(C0) 145
2.5	2.02 2.07	E(0°) 233 E(C90) 93 E(C0) 93
3.0	2.42 2.49	E(0°) 162 E(C90) 65 E(C0) 64

— C0/C180 (Half-peak divergence: 45.0°)
— C90/C270 (Half-peak divergence: 44.0°)

Energy efficiency class

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

Illuminotechnical Features

Light Output Ratio (LOR)	62 %
Source lumens	1487 lm
Delivered lumens	926 lm
Consumption	15.5 W
Luminaire efficacy	59 lm/W
Colour temperature	2700 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)

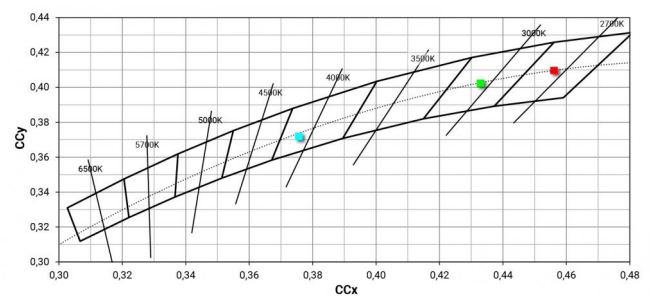
UGR

UGR axial	23.7
UGR transversal	23.6
X=4H Y=8H	S=0.25H
Reflection factor	70/50/20

OPTICAL

C0/C180 optics	44°
Light distribution symmetry	Symmetrical

COLOR VECTOR GRAPHIC





Optics
Light distribution: spot,Cover material: uv resistant polycarbonate

Code
99805



Optics
Light distribution: medium flood,Cover material: ,uv resistant polycarbonate,uv resistant polycarbonate,uv resistant polycarbonate

Code
99806



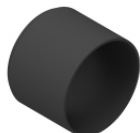
Optics
Light distribution: flood,Cover material: ,uv resistant polycarbonate,uv resistant polycarbonate,uv resistant polycarbonate

Code
99807



Anti-glare
Anti-glare Type: 45° cylindrical screen.
Material:Pom-C, colour:Black.

Code
99773



Anti-glare
Anti-glare Type: cylindrical screen.
Material:Pom-C, colour:Black.

Code
99774



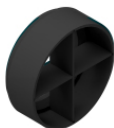
Diffuser
Diffuser Type: elliptical filter.
Material:Pom-C, colour:Black.

Code
99775



Anti-glare
Anti-glare Type: honeycomb louvre.
Material:Pom-C, colour:Black.

Code
99776



Anti-glare
Anti-glare Type: cross louvres.
Material:Pom-C, colour:Black.

Code
99777



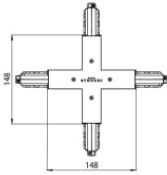
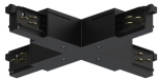
		<p>Track Length: 1000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.</p>	<p>Finish White</p> <p>Code 83336</p>
		<p>Track Length: 2000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.</p>	<p>Finish White</p> <p>Code 83337</p>
		<p>Track - Three-phase Recessed White DALI Track, 2 m (9000-2/W-R) Length: 2000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.</p>	<p>Finish White</p> <p>Code 80991</p>
		<p>Track Length: 2000mm; Type of track: Standard. Material:Aluminium, colour:Black, processing:Coating.</p>	<p>Finish Black</p> <p>Code 83340</p>
		<p>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.</p>	<p>Finish Black</p> <p>Code 80995</p>
		<p>Power supply - White Right power supply header (9001/W) Material:PC, colour:white.</p>	<p>Code 81033</p>
		<p>Power supply - Black Right power supply header (9001/B) Material:PC, colour:black.</p>	<p>Code 81034</p>
		<p>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.</p>	<p>Finish Black</p> <p>Code 80994</p>



		<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>Junction - Black power supply junction - centrale (9010/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>81043</td> </tr> </tbody> </table>	Finish	Code	Black	81043
Finish	Code						
Black	81043						
		<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 - Left white T junction - external (9013/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>81051</td> </tr> </tbody> </table>	Finish	Code	White	81051
Finish	Code						
White	81051						
		<p>Junction - Black left T junction - external (9013/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>81052</td> </tr> </tbody> </table>	Finish	Code	Black	81052
Finish	Code						
Black	81052						
		<p>Power supply - White left power supply header (9002/W) Material:PC, colour:white.</p>	<table border="1"> <thead> <tr> <th>Code</th> </tr> </thead> <tbody> <tr> <td>81036</td> </tr> </tbody> </table>	Code	81036		
Code							
81036							
		<p>Junction - Flexible white junction (9018/W) Type flexible curve. Material:PC, colour:white.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>81066</td> </tr> </tbody> </table>	Finish	Code	White	81066
Finish	Code						
White	81066						
		<p>Closing cap - White end cap 9004/W Material:PC, colour:white.</p>	<table border="1"> <thead> <tr> <th>Code</th> </tr> </thead> <tbody> <tr> <td>80999</td> </tr> </tbody> </table>	Code	80999		
Code							
80999							

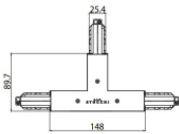


		<p>Track - Three-phase Recessed White DALI Track, 1 m (9000-1/W-R) Length: 1000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.</p>	<p>Finish White</p> <p>Code 80990</p>
		<p>Junction - White electrical junction - internal (9003/W) Type linear. Material:PC, colour:white.</p>	<p>Finish White</p> <p>Code 81039</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 - White L junction - internal (9011/W) Type linear. Material:PC, colour:white.</p>	<p>Finish White</p> <p>Code 81045</p>
		<p>Junction - Black electrical junction - internal (9003/B) Type linear. Material:PC, colour:black.</p>	<p>Finish Black</p> <p>Code 81040</p>
		<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 - Black L junction - external (9012/B) Type linear. Material:PC, colour:black.</p>	<p>Finish Black</p> <p>Code 81049</p>
		<p>Closing cap - Black end cap 9004/B Material:PC, colour:black.</p>	<p>Code 81000</p>



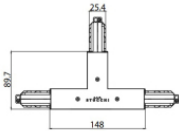
Junction - Black X junction (9017/B)
Type linear.
Material:PC, colour:black.

Finish	Code
Black	81064



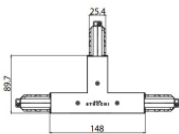
Junction - Left white T junction - internal (9015/W)
Type linear.
Material:PC, colour:white.

Finish	Code
White	81057



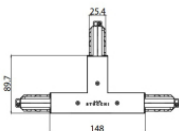
Junction - Left black T junction - internal (9015/B)
Type linear.
Material:PC, colour:black.

Finish	Code
Black	81058



Junction - Right White T junction - internal (9016/W)
Type linear.
Material:PC, colour:white.

Finish	Code
White	81060



Junction - Right black T junction - internal (9016/B)
Type linear.
Material:PC, colour:black.

Finish	Code
Black	81061



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

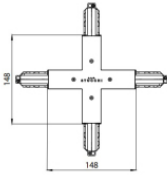
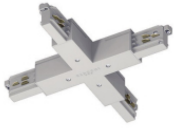


Ceiling rose - 1.5m white pendant luminaires kit + bracket (9000-KIT5-1,5-W)
Material:plastic, colour:white.

Code
81012



		<p>Ceiling rose - 1.5m black pendant luminaires kit + bracket ((9000-KIT5-1,5-B) Material:plastic, colour:black.</p>	<p>Code 81014</p>
		<p>Ceiling rose - 5m white pendant luminaires kit + bracket (9000-KIT5-5-W) Material:plastic, colour:white.</p>	<p>Code 81013</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>Suspensions - White rigid suspension 1m (S-9000-P3-W) Material:plastic, colour:white.</p>	<p>Code 81021</p>
		<p>Suspensions - Black rigid suspension 1m (S-9000-P3-B) Material:plastic, colour:black.</p>	<p>Code 81022</p>
		<p>Bracket - Anodized fixing bracket (S-9000/131) L=35mm, H=14mm, D=24mm. Material:Aluminium, colour:translucent.</p>	<p>Finish Anod. Al.</p> <p>Code 81086</p>
		<p>Bracket - White fixing braket (S-9000/131-W) L=35mm, H=14mm, D=24mm. Material:Aluminium, colour:white, processing:Coating.</p>	<p>Finish White</p> <p>Code 81087</p>
		<p>Bracket - Black fixing braket (S-9000/131-B) L=35mm, H=14mm, D=24mm. Material:Aluminium, colour:Black, processing:Coating.</p>	<p>Finish Black</p> <p>Code 81088</p>



Junction - White X junction (9017/W)
Type linear.
Material:PC, colour:white.

Finish	Code
White	81063



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

Code
81015



Cable cover - White cover for recessed L junction (S-9011-R/6-W)
Material:PC, colour:white.

Code
81075



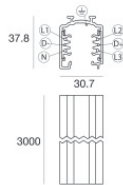
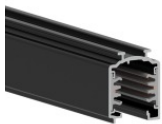
Cable cover
Material:PC, colour:black.

Code
81076



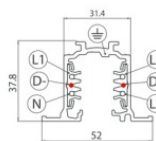
Cable cover - Black recessed cover (S-9001-R/6-B)
Material:PC, colour:black.

Code
81070



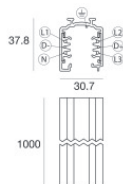
Track
Length: 3000mm; Type of track: Standard.
Material:Aluminium, colour:Black, processing:Coating.

Finish	Code
Black	83341



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
Length: 1000mm; Type of track: Standard.
Material:Aluminium, colour:Black, processing:Coating.

Finish	Code
Black	83339



	<p>Tool - Cutter S-9000/T</p>	<p>Code</p>		
		<p><u>81005</u></p>		
		<p>Junction - Flexible black junction (9018/B) Type flexible curve. Material:PC, colour:black.</p>	<p>Finish</p>	<p>Code</p>
			<p>Black</p>	<p><u>81067</u></p>
		<p>Cable cover - White recessed cover (S-9001-R/6-W) Material:PC, colour:white.</p>	<p>Code</p>	
			<p><u>81069</u></p>	
	<p>Suspensions - 5m white pendant luminaire kit (9000-KIT3-5-W) Material:plastic, colour:white.</p>	<p>Code</p>		
			<p><u>81007</u></p>	
		<p>Suspensions - 5m black pendant luminaire kit (9000-KIT3-5-B) Material:plastic, colour:black.</p>	<p>Code</p>	
			<p><u>81009</u></p>	
		<p>Suspensions - 1.5m black pendant luminaire kit (9000-KIT3-1,5-B) Material:plastic, colour:black.</p>	<p>Code</p>	
			<p><u>81008</u></p>	
	<p>Suspensions - Black rigid suspension clip (S-9000-P2-B) Material:plastic, colour:black.</p>	<p>Code</p>		
			<p><u>81019</u></p>	
		<p>Cable cover - White cover for recessed X junction (S-9017-R/6-W) Material:PC, colour:white.</p>	<p>Code</p>	
			<p><u>81011</u></p>	



		<p>Black three-phase adapter (9009-4/B)</p>	<p>Code 81093</p>
		<p>Bracket - Black stiffening bracket (S-9000/333-B) L=180mm, H=24mm, D=20mm. Material:Aluminium, colour:black RAL 9005, processing:Coating.</p>	<p>Finish Black Code 81026</p>
		<p>Power supply - Black left power supply header (9002/B) Material:PC, colour:black.</p>	<p>Code 81037</p>
		<p>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.</p>	<p>Finish Black Code 80993</p>
		<p>Cable cover - Black cover for recessed X junction (S-9017-R/6-B) Material:PC, colour:black.</p>	<p>Code 81082</p>
		<p>Bracket - White stiffening bracket (S-9000/333-W) L=180mm, H=24mm, D=20mm. Material:Aluminium, colour:white RAL 9010, processing:Coating.</p>	<p>Finish White Code 81025</p>
		<p>Cable cover - White cover for recessed T junction (S-9013-R/6-W) Material:PC, colour:white.</p>	<p>Code 81078</p>
		<p>Suspensions - White rigid suspension clip (S-9000-P2-W) Material:plastic, colour:white.</p>	<p>Code 81018</p>

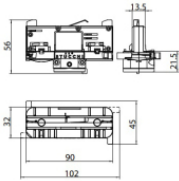


	<p>Cable cover Material:black, colour:black.</p>	<p>Code 83250</p>	
	<p>Cable cover Material:white.</p>	<p>Code 83249</p>	
		<p>Junction - Right black T junction - external (9014/B) Type linear. Material:PC, colour:black.</p>	<p>Finish Black Code 81055</p>
		<p>Cable cover - White cover for recessed junction (S-9010-R/6-W) Material:PC, colour:white.</p>	<p>Code 81072</p>
		<p>Bracket - Anodized stiffening bracket (S-9000/333) L=180mm, H=24mm, D=26mm. Material:Aluminium, colour:Anodised Aluminum, processing:Anodisation.</p>	<p>Finish Code 81024</p>
		<p>Closing cap - White gasket (S-9001/115-W) Material:white.</p>	<p>Code 81084</p>
		<p>Cable cover - Black cover for recessed T junction (S-9013-R/6-B) Material:PC, colour:black.</p>	<p>Code 81079</p>
		<p>Cable cover - Black cover for recessed junction (S-9010-R/6-B) Material:PC, colour:black.</p>	<p>Code 81073</p>



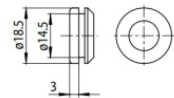
Suspensions - 1.5m white pendant luminaires kit (9000-KIT3-1,5-W)
Material:plastic, colour:white.

Code
81006



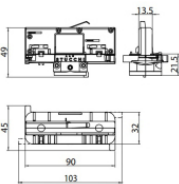
White three-phase adapter (9009-4/W)

Code
81091



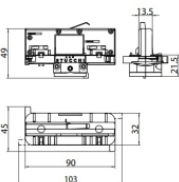
Closing cap - Black gasket (S-9001/115-B)
Material:black, colour:black.

Code
81085



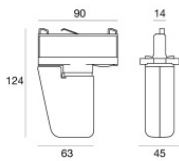
White three-phase/DALI adapter (9009/W)

Code
81094



Black three-phase/DALI adapter (9009/B)

Code
81095



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.

Code
C-E700008