

# LINEAR OPTICS AND GRIDS 1R FOR SMD LIGHT&DARK



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The highly efficient optics with light emission angles of 65° and 90°, in conjunction with the grid, provide very glare-free light with high color constancy (CLC) while maximizing uniformity of illumination even at low ceiling heights. They are therefore ideally suited for use in a wide range of recessed, surface-mounted and suspended luminaires in office, store and architectural applications. An optic with asymmetrical light distribution enables one-sided illumination of walls.

The optics and grids are available in 1Rx7 version with 280 mm length and 1Rx4 version with 160 mm length. The matte grids are available in two versions as single grid or for stringing together.

The optics is fixed together with the module by a screw and the grid can be snapped onto the optics afterwards.

The single lenses are optimized for four 3030 or 2835 midpower LEDs from each of the leading LED manufacturers. Also two 5630 or one 5050 LED fit under the lens (max LED height 1mm) Typical LED types for use with this optic are Seoul STW8A2PD, STW8C12C, STW9C2PB (including Sunlike LEDs), Samsung LM301B, Nichia 757 (also as Tuneable White).

### Linear Optics and Grids 1R for SMD Light&Dark

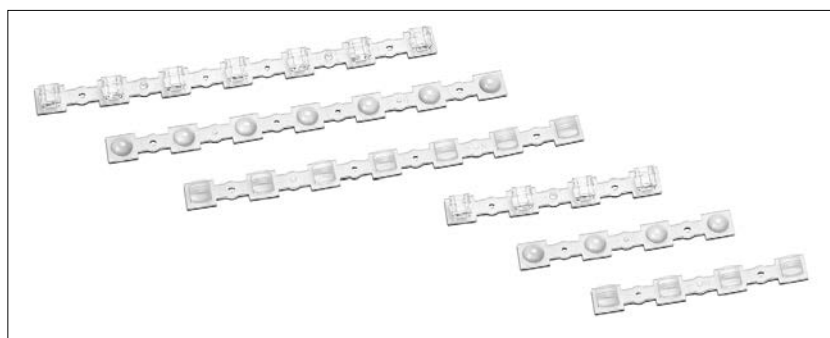
- **HIGH-QUALITY OPTICAL MATERIALS**
- **OPTICAL EFFICIENCY UP TO 92%**
- **LIGHT EMISSION ANGLE 65° AND 90°  
FOR HIGH UNIFORMITY**
- **ASYMMETRIC LIGHT DISTRIBUTION FOR  
WALL LIGHTING**
- **OPTICS WITH CONSTANT LIGHT  
COLOUR OVER BEAM ANGLE  
(CLC)**
- **UGR OPTIMIZED OPTICS WITH GRID**



## Linear Optics 1R for SMD Light&Dark 1Rx7 280 mm 1Rx4 160 mm

### Technical Notes

- For 235, 3030, 5630 and 5050 LEDs of the most common LED manufacturers, with up to four LEDs per lens (for 2835 and 3030).
- Material: PMMA
- Max. allowed temperature: 80 °C
- Light spot distance 40 mm
- Through holes for M3 screws and rivets
- Max. tightening torque for M3 screw: 0.5 Nm



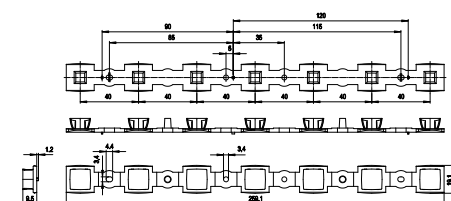
### Lighting properties

- CLC (constant light colour): very low colour temperature deviations over beam angle
- UGR: optimized glare reduction

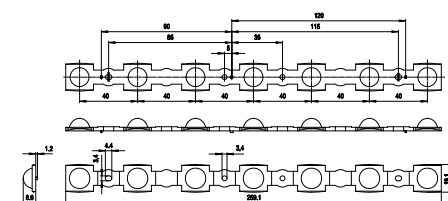
Light distribution	Type	Ref. No.	Lighting properties	Type of construction	Efficiency %	Weight g	Packaging unit pcs.
Medium 65°	91451	<b>571826</b>	UGR, CLC	1Rx7	91	14	324
Wide 90°	91452	<b>571827</b>	UGR, CLC	1Rx7	92	18	324
ASYM	91453	<b>572478</b>	UGR, CLC	1Rx7	88	14.8	324
Medium 65°	91461	<b>571884</b>	UGR, CLC	1Rx4	91	7,7	540
Wide 90°	91462	<b>571885</b>	UGR, CLC	1Rx4	92	10	540
ASYM	91463	<b>572479</b>	UGR, CLC	1Rx4	88	8.2	540

\* Measured with a white grid

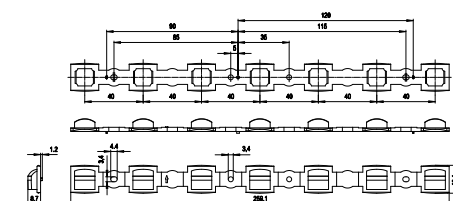
Type 91452



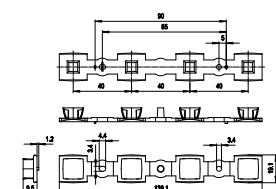
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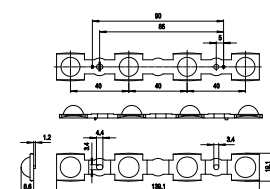
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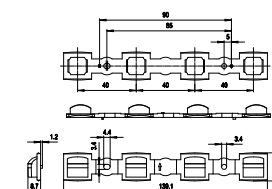
Type 91462



Type 91461



Type 91463

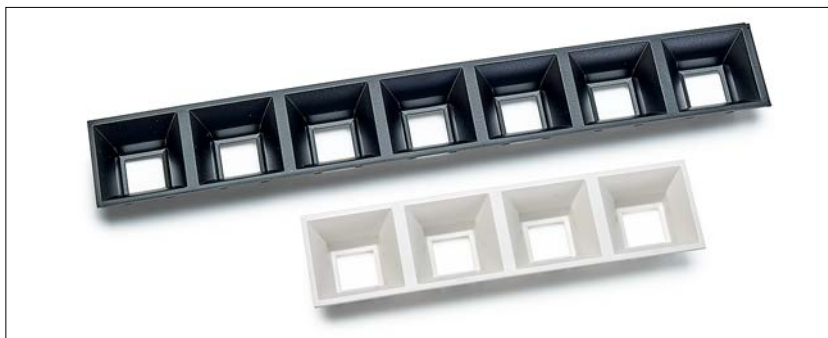


The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

## Linear Grids 1R for SMD Light&Dark 1Rx7 280 mm 1Rx4 160 mm

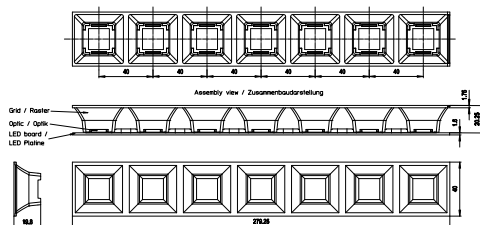
### Technical Notes

- Material: PC white and black
- Max. allowed temperature: 80 °C
- Light spot distance 40 mm
- spacing 1Rx7 grid when lined up: 280 mm
- Clip fixing with optics
- Matt surfaces
- 1Rx7 grid with short ends or with box edge for lining up

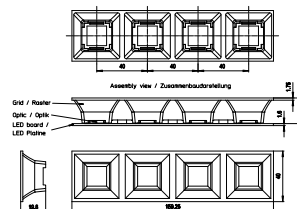


Type	Ref. No.	Type of construction	Color	Weight g	Packaging unit pcs.
91400	<b>571824</b>	1Rx7 short ends	white	35	108
91400	<b>571825</b>	1Rx7 short ends	black	35	108
91401	<b>571880</b>	1Rx7 to line up	white	35	108
91401	<b>571881</b>	1Rx7 to line up	black	35	108
91410	<b>571882</b>	1Rx4 short ends	white	20	
91410	<b>571883</b>	1Rx4 short ends	black	20	

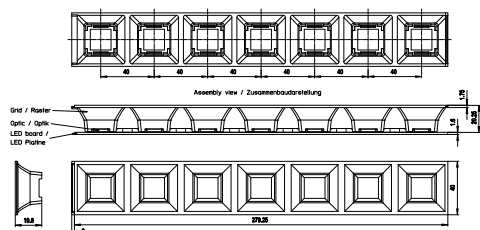
### Type 91400



### Type 91410



### Type 91401

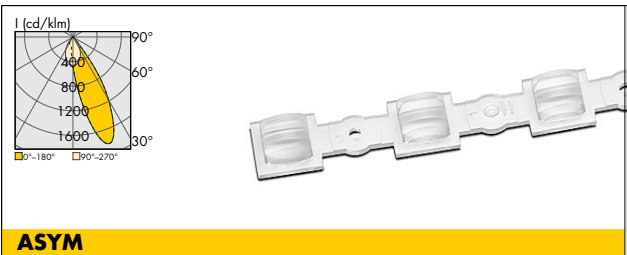
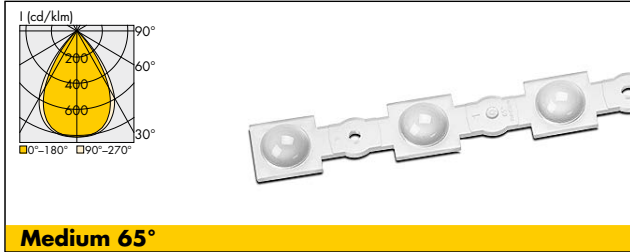
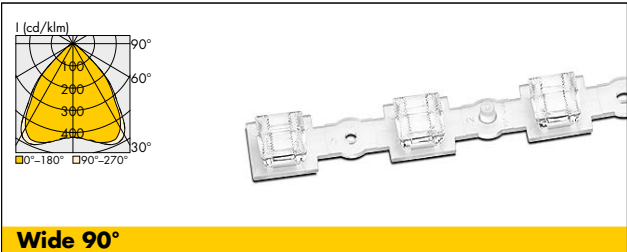


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Linear Optics 1R for SMD Light&Dark

Typ. light distributions with VS LED modules (With 2x2 Seoul 2835 LEDs (STW8A2PD))

At [www.vossloh-schwabe.com](http://www.vossloh-schwabe.com) you will find further light distribution curves with other LED types as well as all data in .ldt and .ies format for download.



Suitable VS LED modules

For optics 65°, 90° und ASYM

VS LED modules	Module type	Optics type	
		1Rx7	1Rx4
LED Line SMD W2.5 Light&Dark	WU-M-684, WU-M-684-LV, WU-M-685, WU-M-685-LV	65°, 90°	—
LED Line SMD W2.5 Light&Dark Asymmetric	WU-M-697	ASYM	—

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