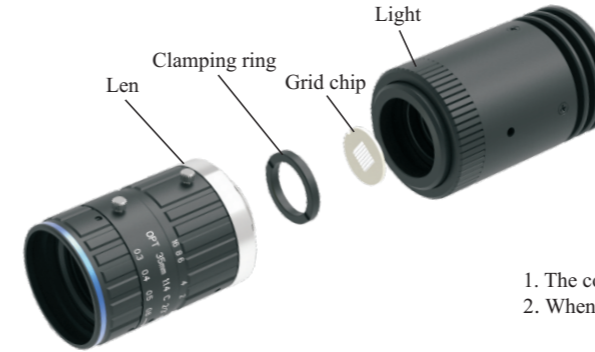




Combination of grid chip and len



1. The coating side of grid chip is facing toward the lens direction when assembling.
2. When replacing the grid chip, rotate the clamping ring to replace the grid chip.

OPT-SL Direct Structured Lights

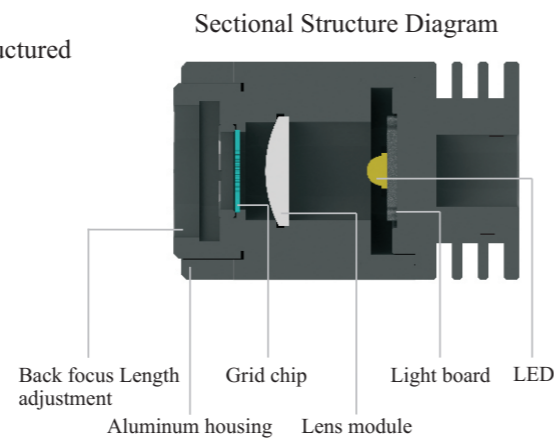
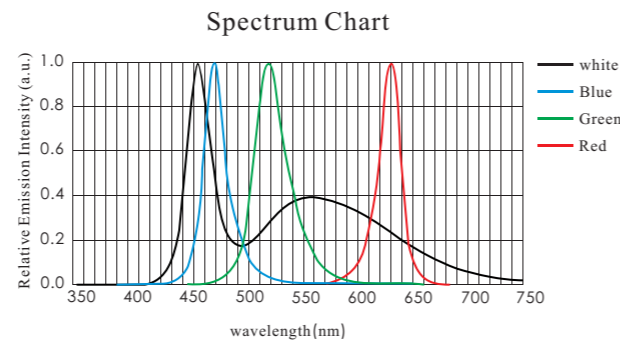
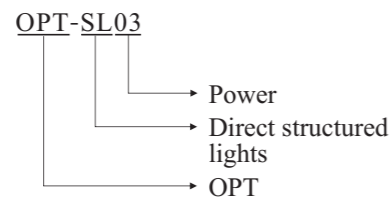
Product Features

- 1 The lens position is adjustable, no need adapter rings
- 2 Suitable for C Mount lens with sensor size of 2/3"
- 3 Multiple grid chips can be customized according to the actual application
- 4 The spot boundary is clear and uniform, can realize precise illumination
- 5 The lights is perpendicular to the measuring surface and oblique illumination refer to OPT-SLS

Application Cases

- ◆ 3D analysis and reconstruction
- ◆ Measure object with complex structure and inclined plane
- ◆ Dimensional measurement of electronic components
- ◆ Planarity control of product
- ◆ Location and alignment for robot picking and placing

Selection Guide



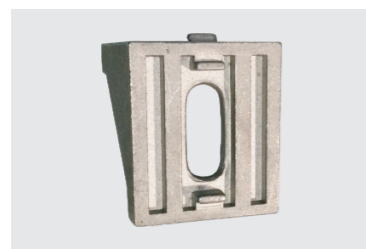
Customization Options

- Customized color
- Mount method
- Customized power
- Customized size
- Customized pattern
- Customized len

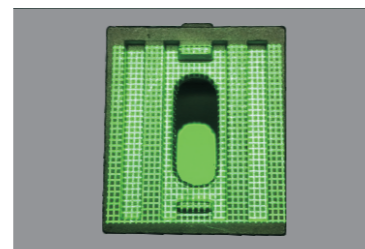


Application Example

Inspection items: metal height measurement



Original Image



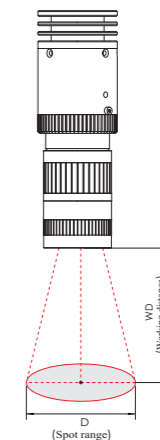
Result Image

Lens and spot size

both the lens and grid chips should be ordered separately

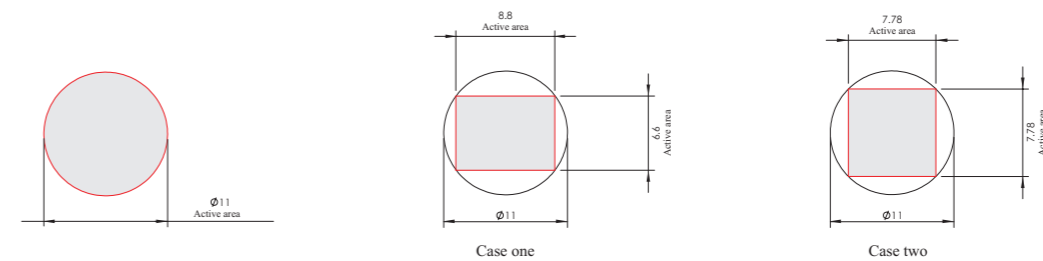

| Len Model | Working distance WD | | | | | | |
|--------------|---------------------|-------|-------|-------|-------|-------|-------|
| | 50mm | 100mm | 150mm | 200mm | 300mm | 400mm | 500mm |
| OPT-C0825-5M | 90 | 160 | 220 | 280 | 420 | 460 | - |
| OPT-C1216-5M | 70 | 110 | 160 | 200 | 290 | 380 | 490 |
| OPT-C1614-5M | - | 90 | 120 | 150 | 220 | 300 | 360 |
| OPT-C2514-5M | - | - | 70 | 100 | 140 | 170 | 210 |
| OPT-C3514-5M | - | - | - | - | 100 | 130 | 160 |

- Notes:
1. The above data is OPT-SL03 and OPT-SL10 measured values, only for reference.
 2. It can be suitable for other C Mount lens with sensor size of 2/3", and lens selection reference P47-75.




Grid chip customization instructions


Grid chip active area


OPT-PGS-L-0.05
Specification : Line
Line thickness : 0.05mm




OPT-PGS-G-0.05-0.45
Specification : Grid
Line thickness : 0.05mm
Line gap : 0.45mm



OPT-PGS-G-0.05
Specification : Cross
Line thickness : 0.05mm



OPT-PGS-R-0.05-0.15
Specification : Round
Line thickness : 0.05mm
Line gap : 0.15mm



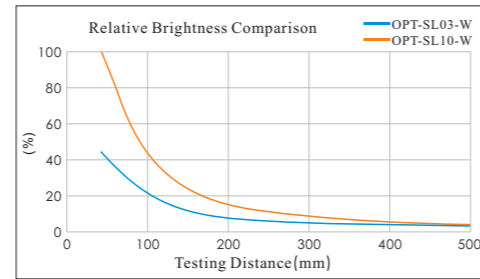
OPT-PGS-L-0.05-0.45
Specification : Stripe
Line thickness : 0.05mm
Line gap : 0.45mm

- Notes:
1. Grid chip accuracy can be $\leq 2\mu\text{m}$.
 2. Grid chip can be customized by providing precise geometric parameters information, according to the actual application.

Light Luminance

| Model | Luminance(X100lux) | Model | Luminance(X100lux) |
|------------|--------------------|------------|--------------------|
| OPT-SL03-R | 120 | OPT-SL10-R | 280 |
| OPT-SL03-G | 130 | OPT-SL10-G | 320 |
| OPT-SL03-B | 170 | OPT-SL10-B | 510 |
| OPT-SL03-W | 330 | OPT-SL10-W | 700 |

Note: The above values are measured by using the lens with the focal length of 25mm without grid chip. The F value is 1.4 and the working distance is 100mm, only for reference.

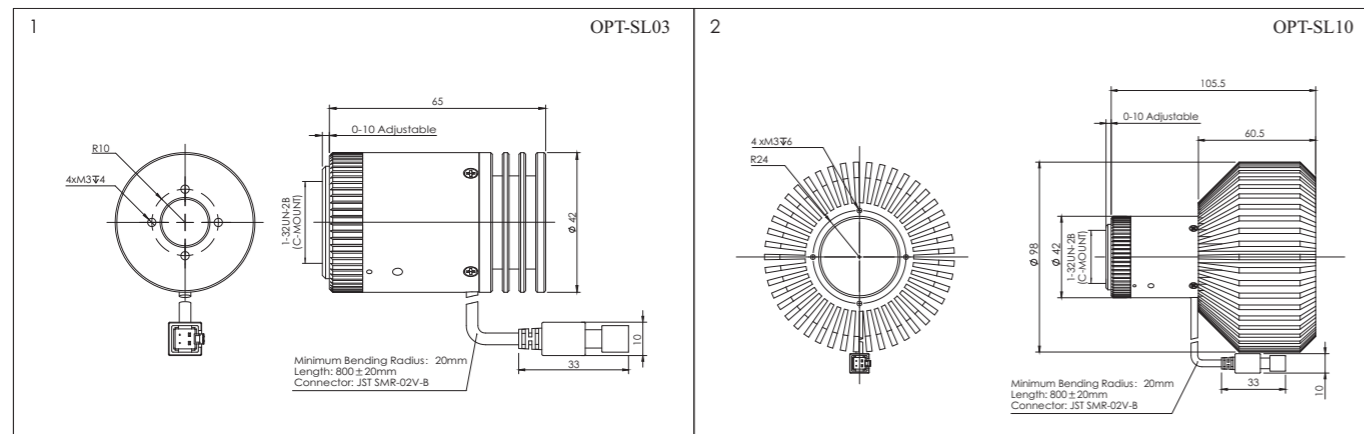


Note: The above data is test result in the same conditions, only for reference.

Model Table

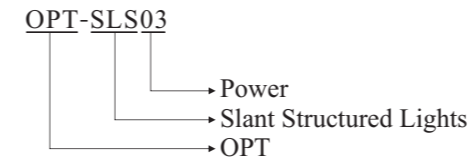
| No. | Model | Output ● | Output ○●● | Recommended controller |
|-----|----------|-----------|------------|------------------------|
| 1 | OPT-SL03 | 1A/2.6W | 1A/3.5W | OPT-DPA1005E |
| 2 | OPT-SL10 | 0.7A/7.4W | 0.7A/9.1W | OPT-DPA1012E |

Dimensional Drawings [mm]

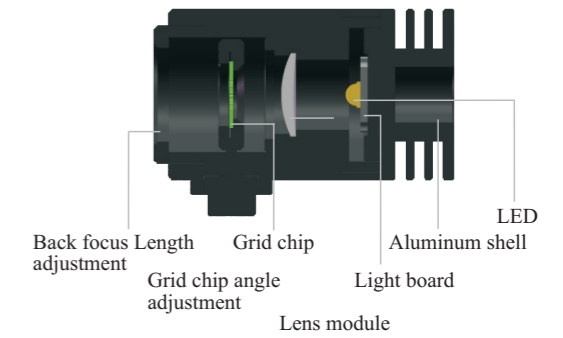


OPT-SLS Slant Structured Lights

Selection Guide



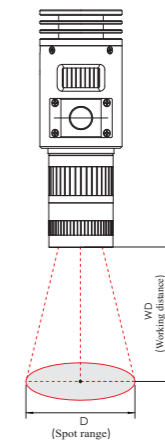
Sectional Structure Diagram



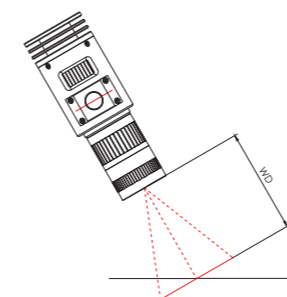
Lens and spot size

| Len Model | Working distance/WD | | | | | | |
|--------------|---------------------|-------|-------|-------|-------|-------|-------|
| | 50mm | 100mm | 150mm | 200mm | 300mm | 400mm | 500mm |
| | Spot diameter (mm) | | | | | | |
| OPT-C0825-5M | 60 | 115 | 160 | 210 | 300 | 390 | 480 |
| OPT-C1216-5M | 45 | 75 | 105 | 140 | 205 | 270 | 335 |
| OPT-C1614-5M | 40 | 65 | 90 | 115 | 160 | 210 | 260 |
| OPT-C2514-5M | 20 | 35 | 45 | 65 | 95 | 125 | 160 |
| OPT-C3514-5M | - | 25 | 35 | 50 | 70 | 90 | 115 |

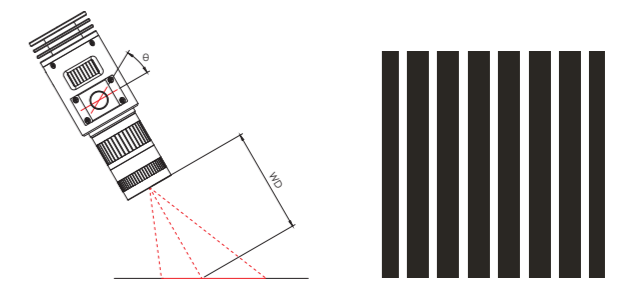
Notes : The above data are OPT-SLS03, OPT-SLS10 with zero angle measured values. Lens selection reference P47-75.



Usage method



Only part of the features can be accurately focused, when the light is tilted without the adjustment of grid chip.



By adjusting the angle of the grid chip, the feature of the whole grid chip can be accurately focused, and the adjustment range of the grid chip is less than 45 degrees.

Application Example

Inspection items: Character depth inspection on metal surface



Original Image



Illuminated

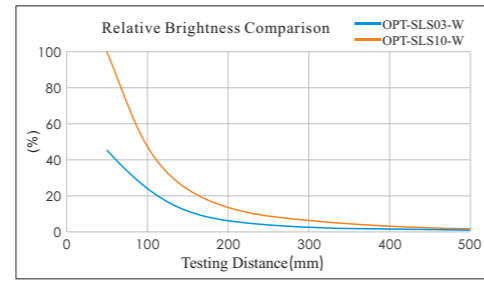


Result Image

Light Luminance

| Model | Luminance(X100lux) | Model | Luminance(X100lux) |
|-------------|---------------------|-------------|---------------------|
| OPT-SLS03-R | 100 | OPT-SLS10-R | 180 |
| OPT-SLS03-G | 90 | OPT-SLS10-G | 210 |
| OPT-SLS03-B | 130 | OPT-SLS10-B | 300 |
| OPT-SLS03-W | 250 | OPT-SLS10-W | 650 |

Note: The above values are measured by using the lens with the focal length of 25mm without grid chip. The F value is 1.4 and the working distance is 100mm, only for reference.



Note: The above data are test result with zero angle of grid chip, only for reference.

Model Table

| No. | Model | Output ● | Output ○ ● | Recommended controller |
|-----|-----------|-----------|------------|------------------------|
| 1 | OPT-SLS03 | 1A/2.6W | 1A/3.5W | OPT-DPA1005E |
| 2 | OPT-SLS10 | 0.7A/7.4W | 0.7A/9.1W | OPT-DPA1012E |

Dimensional Drawings [mm]

