

Sensing LED ring lighting

# OPR series

LED lighting controller  
Advanced  
OPPF series

Part number	Outer diameter	Inner diameter
OPR-32-10W	φ32mm	φ10mm
OPR-S55-28W	φ55mm	φ28mm
OPR-S70-43W	φ70mm	φ43mm
OPR-S85-58W	φ85mm	φ58mm



Patent pending



## Sensing LED ring lighting is now available!

- Brightness feedback controlling by “FALUX sensing”
- 2 way lighting, convergent & wide, by attachment lens



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# Sensing LED ring lighting OPR series

- “FALUX sensing” enables monitoring of LED temperature / brightness and feedback controlling
- You can choose convergent mode and wide mode by attachment lens.
- 2 times brighter than conventional LED lighting and brightness distribution curve is improved.

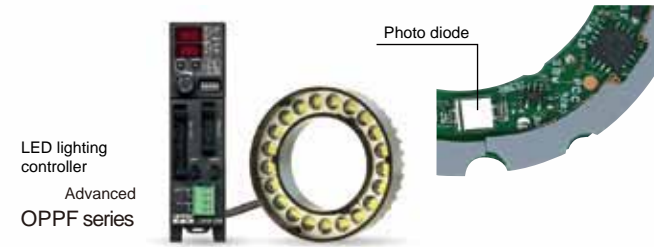
Patent pending



Sensing and feedback controlling technology “FALUX sensing” \* except OPR-32-10W

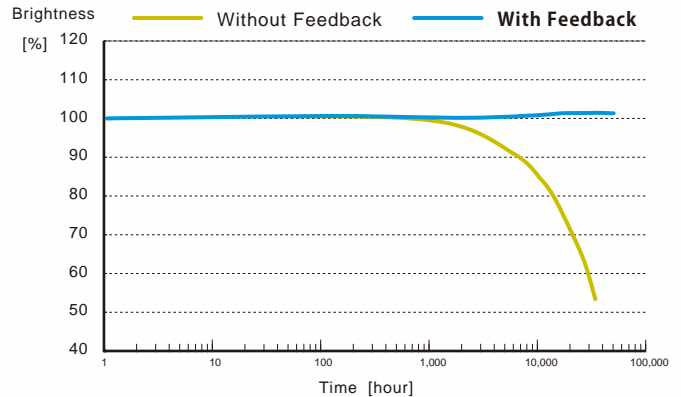
Multiple photo diodes detect LED brightness regardless its flashing pulse width. It provides brightness and temperature data through power line.

LED lighting controller OPF series can control its LED brightness utilizing this data. This technology enables long life around 40k hours.



Comparison With/Without feedback controlling

LED : OPR-S55-28W PWM pulse width : 100% Cable length : 5m Ta=30°C

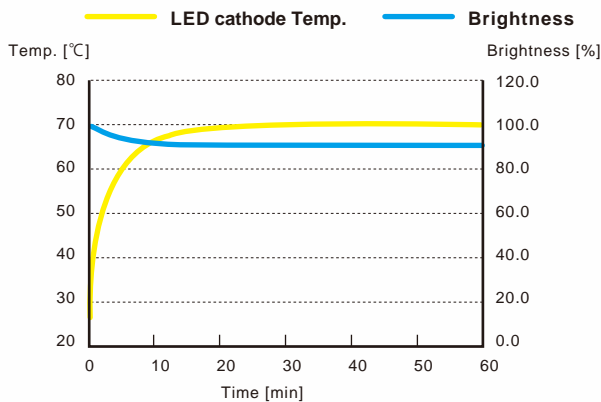


“FALUX” keeps brightness stable tracking temperature.

Patent pending

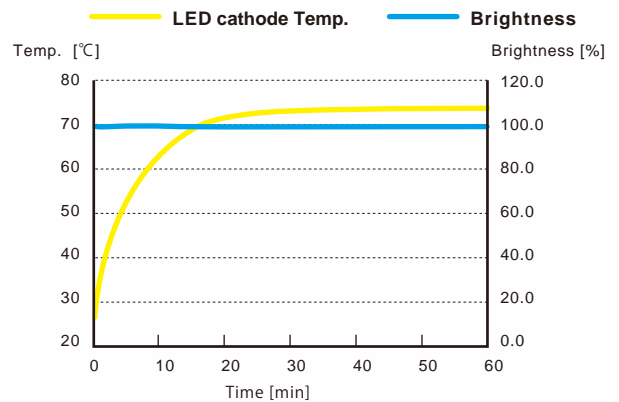
Constant current regulator adjusts brightness of each LED and temperature tracking circuitry keeps brightness stable especially at the start up moment.

**Without FALUX** Brightness changes depends on LED temperature. You have to screen LED precisely but it doesn't help to keep its brightness stable very much.



Conventional OPDR-50-28W

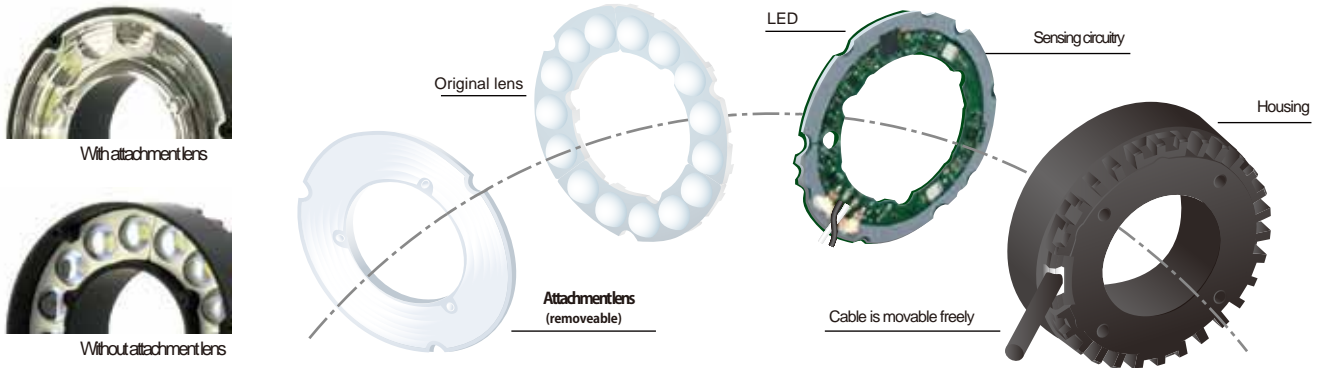
**With FALUX** FALUX keeps brightness of each LED even the temperature changes.



New product OPR-S55-28W

## 2 Way lighting, convergent & wide, by attachment lens

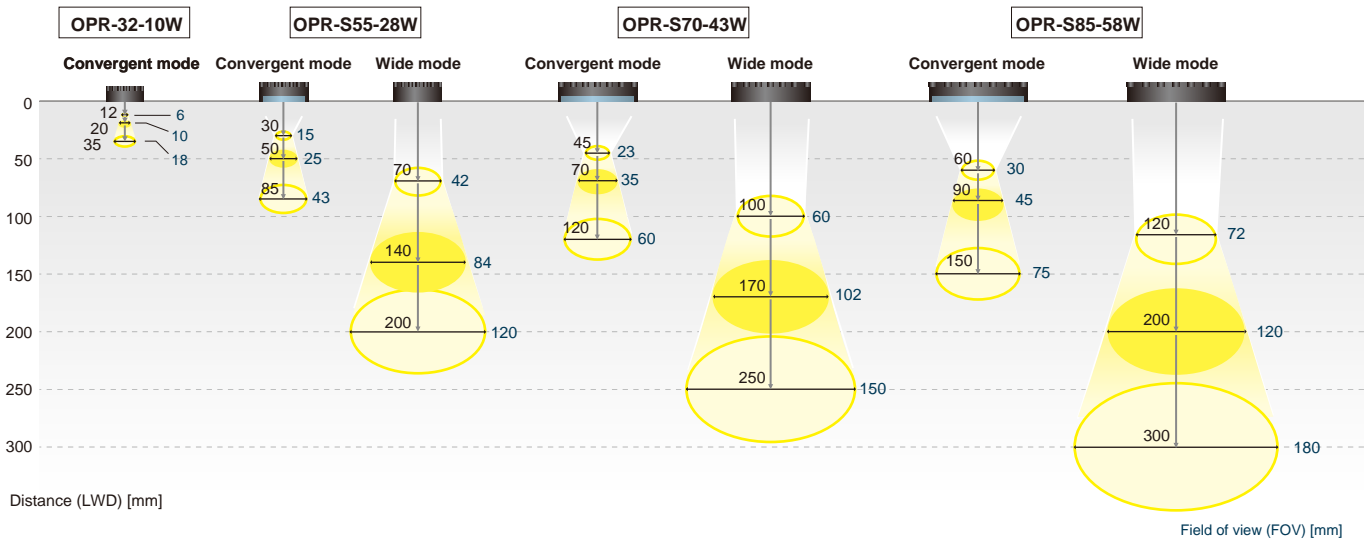
Original lens has optimized light distribution for machine vision. It leads light to photo diodes for accurate brightness sensing. Attachment lens enables 2 way lighting, convergent & wide mode.



## Light Working Distance (LWD) and Field Of View (FOV)

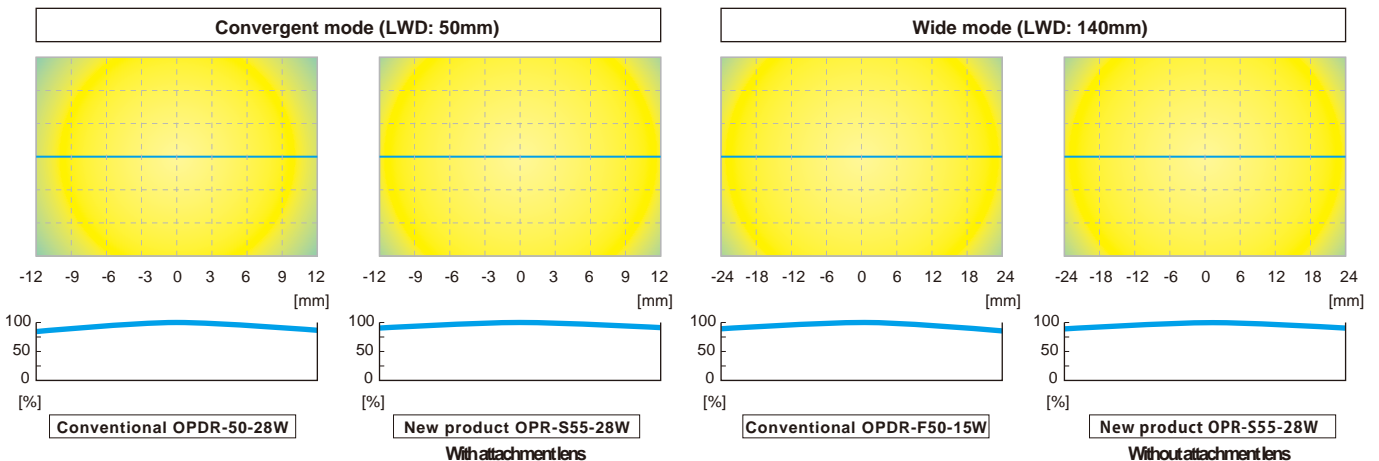
You can choose convergent mode (with attachment lens) or wide mode (without attachment lens).

- Convergent mode: The lens changes the light angle 20 degree inside to get high brightness converged.
- Wide mode: You can get the wider lighting area the longer distance.



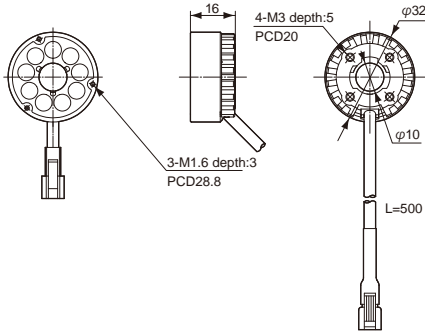
## Brightness distribution comparison

High efficiency LED and optimized design of lens and heat sink enable 2 times brightness than conventional one. You can get wider area with even brightness by convergent mode that helps stable inspection. New design helps decreasing number of LEDs drastically and improving evenness of brightness even for wide mode.

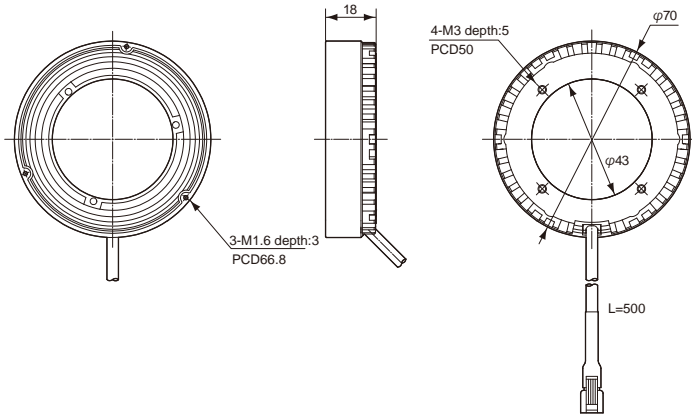


## Dimensions

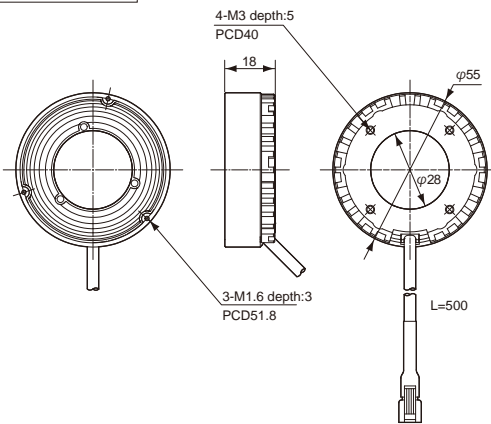
OPR-32-10W



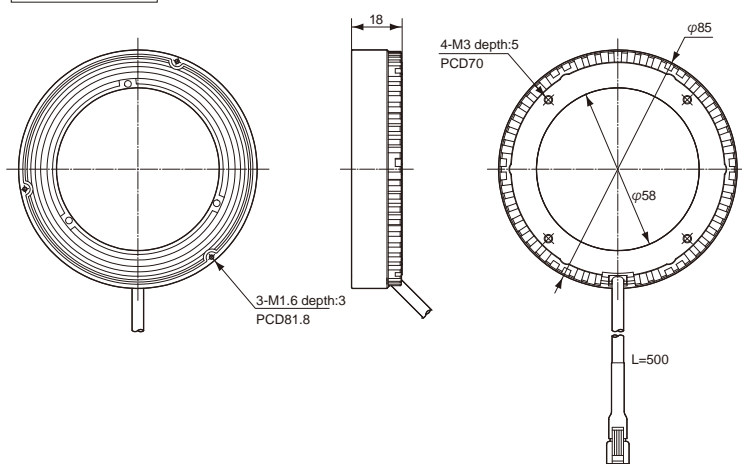
OPR-S70-43W



OPR-S55-28W





OPR-S85-58W



## Line up

[mm]

Part number			Attachment Lens	Power dissipation	Weight
OPR-32-10W	N.A.	Yes	N.A.	3.1W	35g
OPR-S55-28W	Yes	Yes	Yes	5.1W	60g
OPR-S70-43W	Yes	Yes	Yes	7.2W	75g
OPR-S85-58W	Yes	Yes	Yes	9.2W	90g

\* "FALUX sensing" is available with LED controller "OPPF series"

## Specifications

Light color	White	Shock resistance	10G X, Y, Z 3 times
Color temp.	6,000K	LED life	7,000 hours when brightness drops 10% / 100% duty, 30 deg.C (typical data)
Power supply	DC12V	Material	Housing: ADC12 and PC, Lens: PC and PMMA
Operating temp./humid.	0~40°C / 35~85%/RH		Heat transition sheet: Silicon rubber
Storage temp./humid.	-20~70°C / 35~95%/RH	Conformity	CE, RoHS
Vibration resistance	10~55Hz 1.5mm X, Y, Z 2hours	Accessory	Diffuse plate (60%), Diffuse plate (80%), Transparent cover, Polarizing plate



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