


**product features**


- 4-5 Times Brighter Than Standard High Current LED Lights
- SafeStrobe Technology
- 40, 1mm<sup>2</sup> Die High Current LEDs
- Different Lenses Available
- Conversion Adapters For Different Cameras
- PNP and NPN Strobe Input
- Up to 5000 Strokes Per Second
- Maximum Strobe Time 125mS
- Analog Intensity 0-10VDC Signal


**product specifications**

|                          |  |
|--------------------------|--|
| <b>Electrical Input</b>  | 24VDC +/- 5%   |
| <b>Current</b>           | Max. 15A draw during strobe – Max. Average 1.5A                          |
| <b>Wattage</b>           | Max. 360W during strobe - Max. Avg. 36W                                  |
| <b>Strobe Input</b>      | PNP ▶ +4VDC or greater to activate.   NPN ▶ GND (<1VDC) to activate      |
| <b>PNP Line</b>          | 3.7mA @ 3VDC   6.2mA @ 5VDC   12.6mA @ 10VDC   30.4mA @ 24VDC            |
| <b>NPN Line</b>          | 22mA @ Common (0VDC)   |
| <b>Duty Cycle</b>        | Max. 10%   |
| <b>Strobe/Pulse Time</b> | Max. 5000 SPS (Strokes Per Second)   Max. Single Pulse = 125ms           |
| <b>Analog Intensity</b>  | The output is adjustable from 10%-100% of brightness by a 0-10VDC signal |
| <b>Connection</b>        | 5 pin M12 connector  |
| <b>IP Rating</b>         | IP50   |
| <b>Certification</b>     | CE and RoHS certified  |
| <b>IEC 62471 Rating</b>  | See page 4   |


**product number key**

## ODRL200 – XXX – X\* —» Part Number Key

**Product Family:**  
Ring Light  
ODRL200

**Color:**  
470 – Blue  
505 – Cyan  
530 – Green  
625 – Red  
850, 940 – IR  
WHI - White

**Lenses:**  
N- Narrow

\* Lights come standard with Wide lenses

CE and RoHS Compliant



## warnings



### Attention

Please note that the power requirements are up to 15A at 24VDC. Failure to supply light with up to 15A can result in non-repeatable lighting. Contact Smart Vision Lights for more information.



## wiring configuration

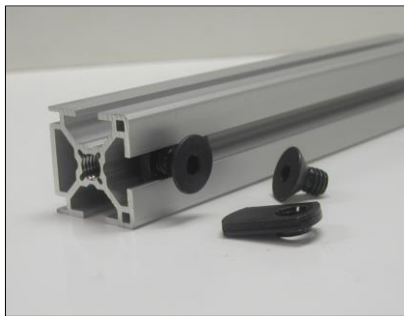
If Analog 0-10VDC is not used to control light intensity;  
+VDC (24VDC) must be connected to Analog Input - Jumper pin 5 to pin 1

|  | Pin | Function          | Signal          | Wire Color |
|--|-----|-------------------|-----------------|------------|
|  | 1   | Power In          | +24VDC          | BROWN      |
|  | 2   | NPN               | Sinking Signal  | WHITE      |
|  | 3   | GND               | Ground          | BLUE       |
|  | 4   | PNP               | Sourcing Signal | BLACK      |
|  | 5   | Intensity Control | 0-10VDC         | GREY †     |

† Some cables use green with yellow stripe for 0-10V adjustment



## mounting & accessories



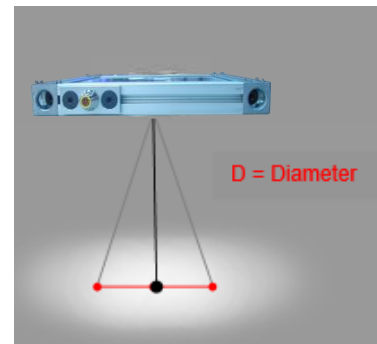
Standard T-nut with  
5/16-18x1/2" bolt



## optical performance

### ODRL200-XXX

| Working Distance<br>mm (inches)                               | Pattern (80%-100% measured intensity)<br>mm (Inches) |
|---|--|
| .5m (20")   | 21cm(8") D   |
| 1m (40")  | 35cm(14") D  |
| Typical output performance                                    |  |
| Distance = .5 meter   | Illumination (Lux)<br>100000                         |
| <i>Illumination measurement taken on White Lights – 6500K</i> |  |

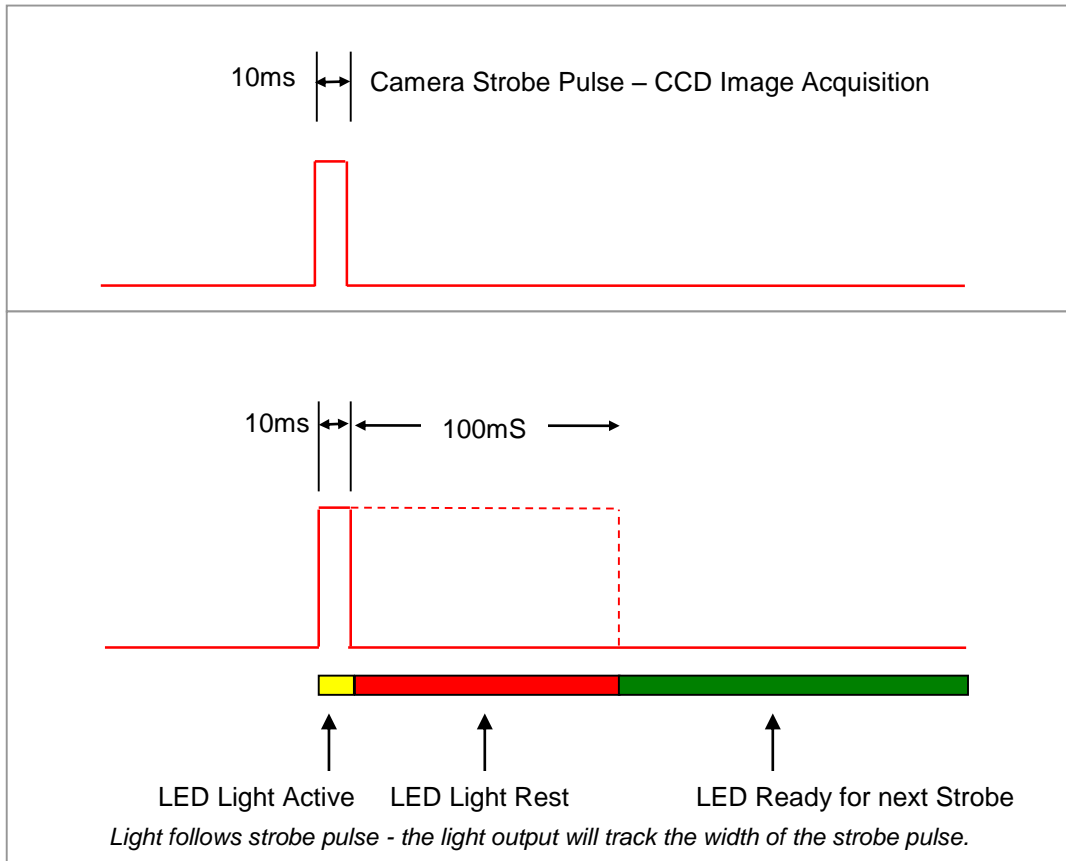


D = Diameter



### Duty Cycle on Performance of Light

*All lights are pulse following*



**Duty Cycle (*D*) is defined as the ratio between Strobe Time and Rest Time**

**Maximum Duty Cycle for OD Light is 10% = .1**

Calculating Rest Time -  $R_T$

$$R_T = \frac{S_T}{D}$$

$S_T$  is the Strobe Time  
 $R_T$  is the Rest Time  
 $D$  is Duty Cycle

**Example: Camera exposure of 10mS where Strobe Time is 10mS.**

$$R_T = \frac{10ms}{.1} = 100mS$$

Rest Time is 100ms for 10ms Strobe Time



According to IEC 62471:2006. Full documentation upon request.

**Notice**

Exempt Group: No photobiological hazard to eyes or skin even for continuous, unrestricted use.  
Applicable for wavelengths: 625 and 850.

**Caution**

Risk Group 1: Possibly hazardous optical radiation emitted from this product. Do not stare at operating lamp. May be harmful to eye. Safe for most applications except prolonged exposures.  
Applicable for wavelengths: 470, 505, 530, and WHI.