The ODR130 Series of brick light features an Overdrive driver with NPN or PNP signal options. The all metal construction of the Ring Light Series of lights provides a small particle resistant and all around durable light. Its simple plug and play 5 Pin M12 connector allows for ease of use while allowing for full control. The 0-10 VDC intensity control assists in gaining full control of the light output. A standard 42 mm inner hole diameter allows for use with nearly all camera systems with available step-up and step-down conversion kits adapters.

- 4-5 Times Brighter Than Standard High Current LEDs
- SafeStrobe Technology
- T-Slot for Mounting
- Conversion Adapters For Different Cameras
- PNP and NPN Strobe Input
- Standard With Wide Lenses
- Up to 5000 Strobes Per Second
- Maximum Strobe Time 125mS
- Eight, 1mm² Die High Current LEDs

### Electrical Input
- 24 VDC +/- 5%

### Current
- Max. 4A draw during strobe – Max Average 400mA

### Wattage
- Max. 96W during strobe - Max. Avg. 9.6W

### Strobe Input
- PNP ► +4VDC or greater to activate.  
- NPN ► GND (<1VDC) to activate

### PNP Line
- 3.7mA @ 3VDC  
- 6.2mA @ 5VDC  
- 12.6mA @ 10VDC  
- 30.4mA @ 24 VDC

### NPN Line
- 22mA @ Common (0VDC)

### Duty Cycle
- Max. 10%

### Strobe/Pulse Time
- Max. 5000 SPS (Strobes Per Second)  
- Max. Single Pulse = 125ms

### Red Indicator LED
- ON = Light Rest (LED inactive)  
- OFF = LED/Light Ready

### Green Indicator LED
- ON = Power

### Potentiometer
- Intensity control of 10% to 100%  
- Clockwise increases intensity

### Analog Intensity
- The output is adjustable from 0 -100% of brightness by a 0 -10 VDC signal

### Connection
- 5 pin M12 connector

### Ambient Temp.
- -20º - 50º C (-4º - 122º F)

### IP Rating
- IP50

### Weight
- ~325g

### Certification
- CE and RoHS certified

### IEC 62471 Rating
- See page 5
If Analog 0-10 VDC is not used to control light intensity; +VDC (24VDC) must be connected to Analog Input - Jumper pin 5 to pin 1

<table>
<thead>
<tr>
<th>Pin</th>
<th>Function</th>
<th>Signal</th>
<th>Wire Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power In</td>
<td>+24VDC</td>
<td>BROWN</td>
</tr>
<tr>
<td>2</td>
<td>NPN</td>
<td>Sinking Signal</td>
<td>WHITE</td>
</tr>
<tr>
<td>3</td>
<td>GND</td>
<td>Ground</td>
<td>BLUE</td>
</tr>
<tr>
<td>4</td>
<td>PNP</td>
<td>Sourcing Signal</td>
<td>BLACK</td>
</tr>
<tr>
<td>5</td>
<td>Intensity Control</td>
<td>0-10VDC</td>
<td>GREY ᶧ</td>
</tr>
</tbody>
</table>

* Some cables use green with yellow stripe for 0-10V adjustment
<table>
<thead>
<tr>
<th>Working Distance (mm)</th>
<th>Pattern (80%-100% measured intensity) (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>.25m (10&quot;)</td>
<td>150mm (~6&quot;) D</td>
</tr>
<tr>
<td>.5m (20&quot;)</td>
<td>250mm (~10&quot;) D</td>
</tr>
<tr>
<td>.75m (30&quot;)</td>
<td>350mm (~14&quot;) D</td>
</tr>
<tr>
<td>1m (40&quot;)</td>
<td>450mm (~18&quot;) D</td>
</tr>
</tbody>
</table>

**Typical output performance**

**Illumination (Lux)**

**Distance = .5 meter**

*Illumination measurement taken on White Lights – 6500K*

---

<table>
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<tr>
<th>Working Distance (mm)</th>
<th>Pattern (80%-100% measured intensity) (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>.25m (10&quot;)</td>
<td>90mm (~3.5&quot;)</td>
</tr>
<tr>
<td>.5m (20&quot;)</td>
<td>120mm (~4.7&quot;)</td>
</tr>
<tr>
<td>.75m (30&quot;)</td>
<td>160mm (~6.3&quot;)</td>
</tr>
<tr>
<td>1m (40&quot;)</td>
<td>220mm (~8.6&quot;)</td>
</tr>
</tbody>
</table>

**Typical output performance**

**Illumination (Lux)**

**Distance = .5 meter**

*Illumination measurement taken on White Lights – 6500K*
Duty Cycle on Performance of Light

All lights are pulse following

10ms Camera Strobe Pulse – CCD Image Acquisition

10ms 100mS

LED Light Active    LED Light Rest    LED Ready for next Strobe

Light follows strobe pulse - the light output will track the width of the strobe pulse.

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 - \( R_T \)

\[
R_T = \frac{ST}{D}
\]

\( S_T \) is the Strobe Time

\( R_T \) is the Rest Time

\( D \) is Duty Cycle

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

\[
R_T = \frac{10\text{ms}}{.1} = 100\text{mS}
\]

Rest Time is 100mS for 10ms Strobe Time
Step Up Adapter Kits

Step Up Adapter Kits includes step up rings, 6 set screws and hex tool. Lenses can be mounted to front or back of ring light. Filters can also be installed.

<table>
<thead>
<tr>
<th>M46 step-up</th>
<th>Lens thread size</th>
<th>Part #</th>
</tr>
</thead>
<tbody>
<tr>
<td>46-</td>
<td>25.5</td>
<td>SU46-25.5-27</td>
</tr>
<tr>
<td>46-</td>
<td>27</td>
<td>SU46-25.5-27</td>
</tr>
<tr>
<td>46-</td>
<td>30.5</td>
<td>SU46-30.5</td>
</tr>
<tr>
<td>46-</td>
<td>34</td>
<td>SU46-34</td>
</tr>
<tr>
<td>46-</td>
<td>37</td>
<td>SU46-37</td>
</tr>
<tr>
<td>46-</td>
<td>37.5</td>
<td>SU46-37.5</td>
</tr>
<tr>
<td>46-</td>
<td>39</td>
<td>SU46-39</td>
</tr>
<tr>
<td>46-</td>
<td>40.5</td>
<td>SU46-40.5</td>
</tr>
<tr>
<td>46-</td>
<td>43</td>
<td>SU46-43</td>
</tr>
</tbody>
</table>

Step Down Adapter Rings

Step Down rings mount large lenses to light. Step Down rings mount lenses to back of ring light. Filters can also be installed.

<table>
<thead>
<tr>
<th>M46 step-down</th>
<th>Lens thread size</th>
<th>Part #</th>
</tr>
</thead>
<tbody>
<tr>
<td>46-</td>
<td>49</td>
<td>SD46-49</td>
</tr>
<tr>
<td>46-</td>
<td>52</td>
<td>SD46-52</td>
</tr>
<tr>
<td>46-</td>
<td>55</td>
<td>SD46-55</td>
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<tr>
<td>46-</td>
<td>58</td>
<td>SD46-58</td>
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<tr>
<td>46-</td>
<td>62</td>
<td>SD46-62</td>
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<tr>
<td>46-</td>
<td>67</td>
<td>SD46-67</td>
</tr>
<tr>
<td>46-</td>
<td>72</td>
<td>SD46-72</td>
</tr>
</tbody>
</table>

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, 850, and 940.

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: 395, 470, 505, 530, and WHI.

Notice

Risk Group 1: UV emitted from this product. Minimize exposure to eyes and skin. Use appropriate shielding. Safe for most applications except prolonged exposures. Applicable for wavelengths: 395

Caution

Risk Group 2: UV emitted from this product. Eye or skin irritation may result from exposure. Use appropriate shielding. Does not pose optical hazard if aversion responses limit exposure. Applicable for wavelengths: 365