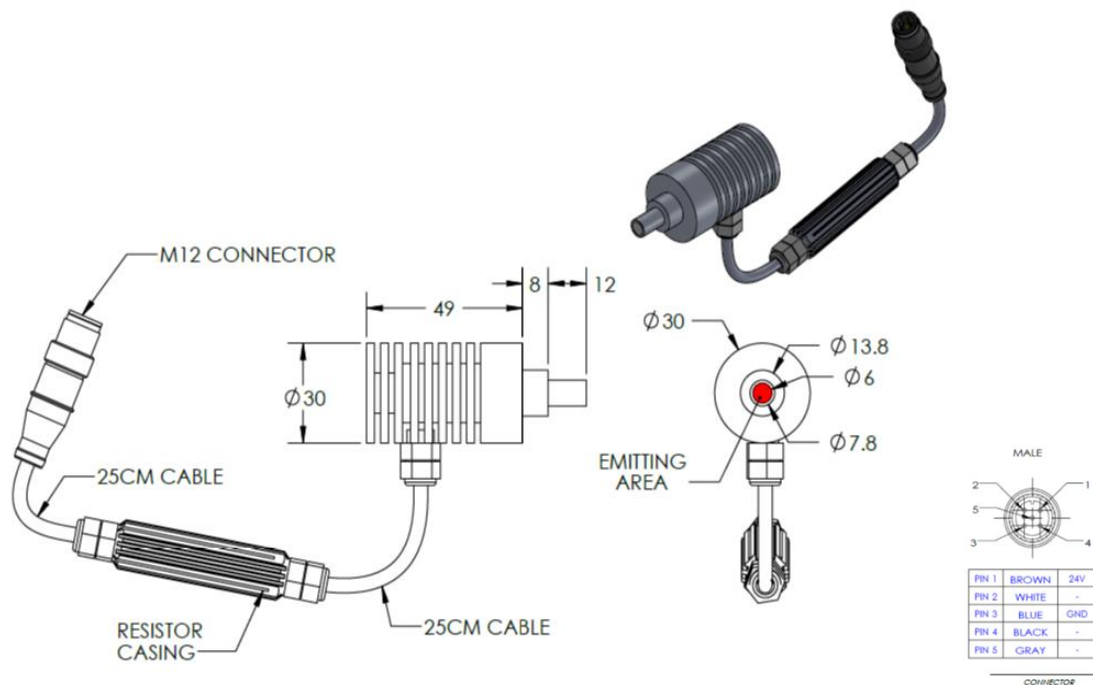




# ILLUMINATOR DATA (ID)

## HBF-00-08-1-W-24V-M12

### Lighting Dimension



### Mechanical Information

|                           |           |
|---------------------------|-----------|
| Casing Material           | Aluminium |
| Storage Temperature Range | 0 - 45°C  |
| Storage Humidity Range    | 20 - 85%  |
| Weight                    | 101 g     |
| Length / Outer Diameter   | 30 mm     |
| Width / Inner Diameter    | 6 mm      |
| Thickness / Height        | 69 mm     |

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| Lighting Information          |   |       |           |       |           |       |       |       |       |       |       |   |       |       |      |      |   |       |       |       |       |   |       |       |       |       |
|-------------------------------|---|-------|-----------|-------|-----------|-------|-------|-------|-------|-------|-------|---|-------|-------|------|------|---|-------|-------|-------|-------|---|-------|-------|-------|-------|
| Part Number                   | HBF-00-08-1-W-24V-M12   |       |           |       |           |       |       |       |       |       |       |   |       |       |      |      |   |       |       |       |       |   |       |       |       |       |
| LED Color                     | WHITE   |       |           |       |           |       |       |       |       |       |       |   |       |       |      |      |   |       |       |       |       |   |       |       |       |       |
| Wavelength                    | *Refer Chromaticity Table below   |       |           |       |           |       |       |       |       |       |       |   |       |       |      |      |   |       |       |       |       |   |       |       |       |       |
| Working Distance              | 40 mm   |       | 50 mm     |       | 60 mm     |       |       |       |       |       |       |   |       |       |      |      |   |       |       |       |       |   |       |       |       |       |
| Intensity (±15%)              | 61600 lux   |       | 35900 lux |       | 22800 lux |       |       |       |       |       |       |   |       |       |      |      |   |       |       |       |       |   |       |       |       |       |
| Illumination (number of row)  | 1   |       |           |       |           |       |       |       |       |       |       |   |       |       |      |      |   |       |       |       |       |   |       |       |       |       |
| Illumination Active Area      | Active Length / Outer Dia.  |       |           | 6 mm  |           |       |       |       |       |       |       |   |       |       |      |      |   |       |       |       |       |   |       |       |       |       |
|                               | Active Width / Inner Dia.   |       |           | -     |           |       |       |       |       |       |       |   |       |       |      |      |   |       |       |       |       |   |       |       |       |       |
| Emission angle                | 0°  |       |           |       |           |       |       |       |       |       |       |   |       |       |      |      |   |       |       |       |       |   |       |       |       |       |
| Eye Safety Class ( IEC62471 ) | EXEMPT  |       |           |       |           |       |       |       |       |       |       |   |       |       |      |      |   |       |       |       |       |   |       |       |       |       |
| Chromaticity Table            | <table><tr><td>X</td><td>0.296</td><td>0.287</td><td>0.307</td><td>0.311</td><td>X</td><td>0.311</td><td>0.307</td><td>0.33</td><td>0.33</td></tr><tr><td>Y</td><td>0.276</td><td>0.295</td><td>0.315</td><td>0.294</td><td>Y</td><td>0.294</td><td>0.315</td><td>0.339</td><td>0.318</td></tr></table> |       |           |       |           |       | X     | 0.296 | 0.287 | 0.307 | 0.311 | X | 0.311 | 0.307 | 0.33 | 0.33 | Y | 0.276 | 0.295 | 0.315 | 0.294 | Y | 0.294 | 0.315 | 0.339 | 0.318 |
| X                             | 0.296   | 0.287 | 0.307     | 0.311 | X         | 0.311 | 0.307 | 0.33  | 0.33  |       |       |   |       |       |      |      |   |       |       |       |       |   |       |       |       |       |
| Y                             | 0.276   | 0.295 | 0.315     | 0.294 | Y         | 0.294 | 0.315 | 0.339 | 0.318 |       |       |   |       |       |      |      |   |       |       |       |       |   |       |       |       |       |
| For White colour only         |   |       |           |       |           |       |       |       |       |       |       |   |       |       |      |      |   |       |       |       |       |   |       |       |       |       |

| Electrical Information                            |          |
|---|----------|
| Rated Constant Voltage                            | 24 V ±2% |
| Rated Constant Current                            | 100 mA   |
| Power Consumption                                 | 2.4 W    |
| Casing temperature,<br>After 60 minutes operation | 55.1 °C  |


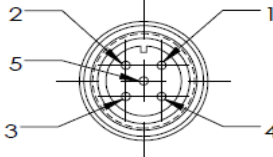
| Strobe Mode Specification     |                              |
|-------------------------------|------------------------------|
| *Normal Strobe Voltage        | 24V                          |
| *Normal Strobe Current        | 100                          |
| Overdrive Voltage Range       | Min: 26 V      Max: 28 V     |
| Overdrive Current Range       | Min: 540 mA      Max: 988 mA |
| Recommended Overdrive Voltage | 26 V                         |
| **Max. Trigger Pulse Duration | 10 msec                      |
| **Max. Duty Cycle             | 10%                          |

\*Normal strobe means the lighting is operated using the rated power. Overdrive means the power supplied to the lighting exceeded the rated power.


\*\*Overdrive condition must not exceed the max. trigger pulse duration and max. duty cycle.

## ILLUMINATOR DATA (ID)

### HBF-00-08-1-W-24V-M12

| Connection Information   |   |        |              |
|--|---|--------|--------------|
| Connector Type (Default)   | M12 5 PIN CONNECTOR (MALE)  |        |              |
| Cable Length   | 50 cm   |        |              |
| Pin Configuration<br> | Pin   | Signal | Cable Colour |
|  | 1   | 24 V   | BROWN        |
|  | 2   | -      | WHITE        |
|  | 3   | GND    | BLUE         |
|  | 4   | -      | BLACK        |
|  | 5   | -      | GRAY         |
|  |  |        |              |

| Additional Information         |   |
|--------------------------------|---|
| Additional Cooling Method      | Attached to machine part for better heat dissipation  |
| Intensity Controller Selection | LC-18-4CH-A1, LC-18-KP1, SDA, SD, ST, ANG, SDP Series |
| CE Conformity                  | YES   |
| RoHS Compliance                | YES   |

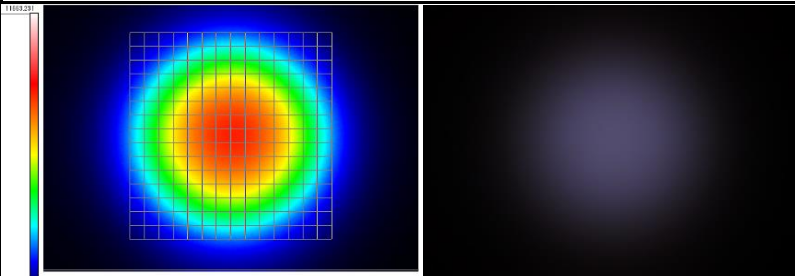
| Extension Cable  |  |
|--|--|
| Connector Type (default)   | M12 5 PIN CONNECTOR (FEMALE)   |
| Part Number  | EXT-FL-M12F-3M-24V   |
| Cable Length (out from female connector)                               | 3000 mm  |
| Extension Cable<br>(connect to M12 5 Pin Male Connector from lighting) |  |

| Application       |   |
|-------------------|---|
| Illumination Type | Direct Ring Light   |
| Application Use   | Substrate Inspection, Label Inspection, Flat Surface Inspection, Fiducial Recognition |



# ILLUMINATOR DATA (ID)

## HBF-00-08-1-W-24V-M12

| Lighting Pattern  |  |                          |          |           |
|-------------------|--|--------------------------|----------|-----------|
| Working Distance  | 50 mm  |                          |          |           |
| Display and Image |  |                          |          |           |
| Data Results      | Horizontal   | Meas.(mm)                | Vertical | Meas.(mm) |
|                   | 90%  | 18                       | 90%      | 18        |
|                   | 80%  | 26                       | 80%      | 26        |
|                   | 70%  | 32                       | 70%      | 32        |
|                   | 60%  | 37                       | 60%      | 38        |
|                   | 50%  | 42                       | 50%      | 43        |
|                   | 40%  | 46                       | 40%      | 48        |
|                   | 30%  | 50                       | 30%      | 51        |
|                   | 20%  | 54                       | 20%      | 55        |
|                   | 10%  | 58                       | 10%      | 60        |
|                   | Max.   | Meas.(cd/m2)<br>7143.891 |          |           |