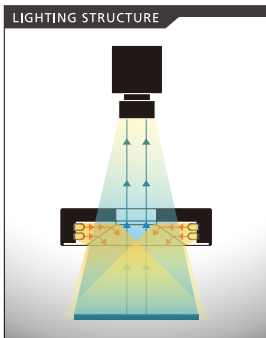


Shadow-less Irradiate Ring Illumination [IFR·IPR Series]

High uniformity shadow-less Irradiate illumination, Ideal for inspecting the surface of uneven or glossy and irregular objects

24V DC Models Available

- Applications**
- Glass products/Bottle manufacturing industry etc.
 - ➔ Inspection for top surface chipping etc.
 - Electronic components industry etc.
 - ➔ Inspection of components on mounted circuit boards etc.
 - Beverage bottles/Plastic molding industry etc.
 - ➔ Inspection of printing on the cap etc.



Standard Size Lineup (IFR Series): $\phi 100$ / $\phi 130$ 2 types (IFR-K Series): $\phi 74$ / $\phi 100$ / $\phi 150$ mm 3 types (IPR Series): $\phi 100$ / $\phi 136$ / $\phi 180$ mm 3 types

Imaging Example

Halation can be reduced by irradiating high uniformity indirect light.



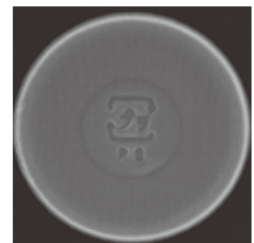
Imaging with a Ring Illumination



IFR-K150DW

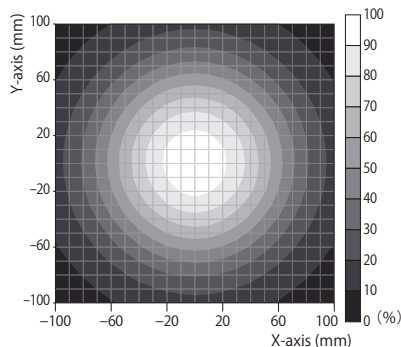


Imaging with a Diffuse Ring Illumination

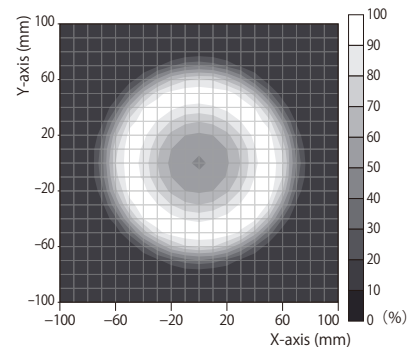


IPR-136/109DW

Illuminance Distribution Chart(Ref.Value)



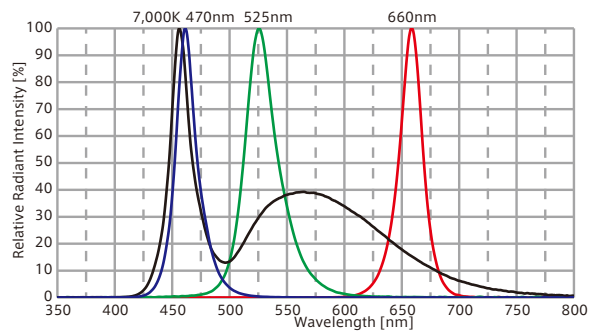
The shadow-less soft illumination provides excellent uniformity. The K-type can illuminate the central part more brightly. Used Illumination: IFR-K150DW WD : 50mm



The movement of the uniformly illuminated surface is possible by changing LWD. Used Illumination: IPR-136-109DW WD : 10mm

- IDBB-LSRF
- IDBC-LSR
- IDBB-LSRH
- IDBB-LSRA
- IDBB-LSRS
- IDBC-LSRC
- IDBB-LSRC
- IDBC-RE
- IDBB-RE
- IDBA-RK
- IQDH-RE
- IMAR-D_8ch
- IDR-LA-8ch
- IDRA-T-8ch
- IMAR-D
- IMAR-CT D
- IHR-LE
- IHRB · IHRA
- IDR-F
- IDR-F33/16
- IDR
- IDR-LA
- IDRA-T
- IFR · IPR
- IDBA-HM
- IDBA-HMS
- IDBA-HMS-IR
- IDBA-FD
- IDBA-LEH2
- IDBA-LEH
- IDBA-LE
- IDBA-SE
- IDBA-SL
- IDBA
- IDBA-Q
- IFLA · IFLB
- IDHM
- IHMA
- IHMA-V
- IFPA
- IFD
- IFD-IR
- IHMA-40D
- IFPA-D
- IPOC
- IFHA
- IDDB-KH · IDDA-KH
- IDUB
- IDD
- IDD-CB
- IQD · IQDH
- IQDA-CB
- IFVA · IFVB
- IFVA-ST
- IFV
- IV-14 · IV-30
- IHV-20 · IHVE-21
- IHVA-SP · IHSL-SP
- IBF
- IHV-FX
- RBOX
- IDBB-CH
- IDHRA
- UV-CAN
- Infrared
- Infrared
- IMAR-RGB
- IDDA-KH-RGB
- RGB Full-color
- ISU
- ISS
- Introduction of Customization
- High speed and high magnification type kit products
- ISC-24
- Image capture evaluation kit products
- IDMU
- ILP
- ILC
- ILV
- ILS
- IPPA_G · IRPA_G
- IPSA · IPPA
- IDGC
- IDPA
- IDCA
- IMC
- IWDV-24
- IWDV(S)-48
- ISC
- IJS
- IJS-30M2-TP/SS
- ILS-40M2-PI/SS
- SAG
- SLLUB
- LLUB
- IFIC

Optical Spectrum (Ref.Value)



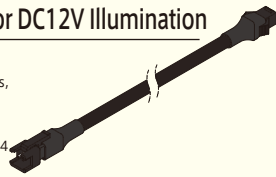
| Model | Color | Power Consumption(W) | Input Voltage | SAG(※) | Applicable Controller | Drawing |
|--------------|--------|----------------------|---------------|--------|---|---------|
| IFR-100□ | R | 2.9 | DC12V | 6F | IDMU Series (P.193) ILP-30M2 (P.197) IDG Series (P.209) and the others Strobe/Overdrive Controllers, etc. | 1 |
| | DW B G | 4.4 | | FF | | |
| IFR-130□ | R | 3.6 | | 70 | | 2 |
| | DW B G | 5.4 | | FF | | |
| IFR-K74/20□ | R | 3.9 | | 70 | | 3 |
| | DW B G | 5.8 | | FF | | |
| IFR-K100□ | R | 2.9 | | 6F | | 4 |
| | DW B G | 4.4 | | FF | | |
| IFR-K150□ | R | 4.1 | | 70 | | 5 |
| | DW B G | 6.2 | | FF | | |
| IPR-100/73□ | R | 5.3 | | 71 | | 6 |
| | DW B G | 8 | | FF | | |
| IPR-136/109□ | R | 7.2 | | 72 | | 7 |
| | DW B G | 10.8 | | FF | | |
| IPR-180/153□ | R | 10.4 | | 75 | | 8 |
| | DW B G | 15.5 | | FF | | |

★The emission color (DW=White,R=Red,B=Blue,G=Green) is indicated by □ in the model table. ★DC24V products are also available. Please feel free to contact us for more information.
 ※SAG: The maximum instantaneous upper limit output voltage setting value in the controller for the corresponding illumination when used in combination with the Overdrive controller.

Singal Type Extension Cable For DC12V Illumination

I-CB-S Series

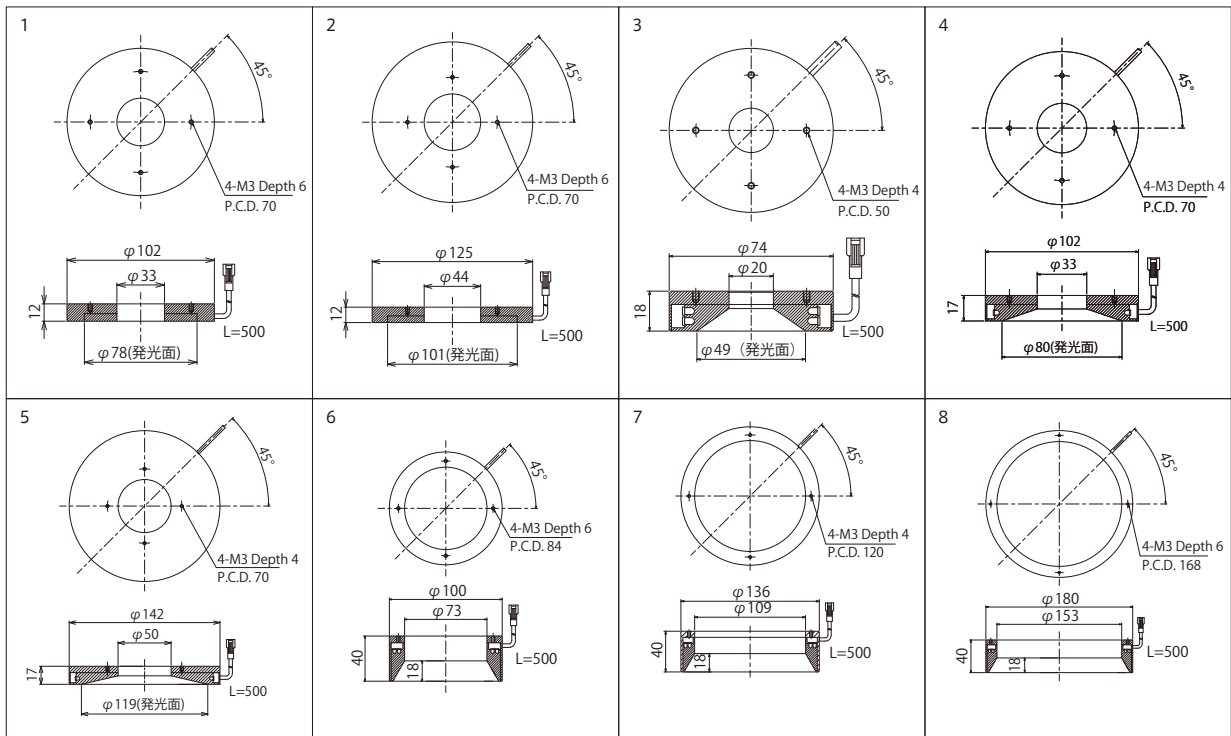
When used for moving parts such as robots, please use the I-CB-S_R-C02 series, which manufactured with robust robot cable with high flexibility. For DC24V model, please use the I-CB-S_24 series or I-CB-S_R-24-C02 series.



Recommended Digital Controller(PWM Control)

IDMU Series

Output control: 1,000 Levels
 Compact PWM controller with DC24V input voltage, ideal for installation inside panels
 Expandable up to 40 channels by linking units
 Equipped with programming and camera trigger output functions, making it versatile.



- Line illumination products
 - IDBB-LSRF
 - IDBB-LSR
 - IDBB-LSRH
 - IDBB-LSRA
 - IDBB-LSRS
 - IDBB-LSRC
 - IDBB-LSRC
 - IDBB-RE
 - IDBB-RE
 - IDBA-RK
 - IQDH-RE
- Ring illumination products
 - IMAR-D_8ch
 - IDR-LA-8ch
 - IDRA-T-8ch
 - IMAR-D
 - IMAR-CT D
 - IHR-LE
 - IHRB · IHRA
 - IDR-F
 - IDR-F33/16
 - IDR
 - IDR-LA
 - IDRA-T
 - IFR · IPR
 - IDBA-HM
- Bar illumination products
 - IDBA-HMS
 - IDBA-HMS-IR
 - IDBA-FD
 - IDBA-LEH2
 - IDBA-LEH
 - IDBA-LE
 - IDBA-SE
 - IDBA-SL
 - IDBA
 - IDBA-Q
 - IFLA · IFLB
 - IDHM
 - IHMA
 - IHMA-V
 - IFPA
 - IFD
 - IFD-IR
 - IHM-40D
 - IFPA-D
 - IPQC
 - IFHA
 - IDDB-KH · IDDA-KH
 - IDUB
 - IDD
 - IDD-CB
 - IQD · IQDH
 - IQDA-CB
 - IFVA · IFVB
 - IFVA-ST
 - IFV
 - IV-14 · IV-30
 - IHV-20 · IHVE-21
 - IHVA-SP · IHSL-SP
 - IBF
 - IHV-FX
 - RBOX
 - IDBB-CH
 - IDHRA
 - UV-CAN
 - Infrared
 - Infrared
 - IMAR-RGB
 - IDDA-KH-RGB
 - RGB Full-color
 - ISU
 - ISS
- Special illumination products
 - Introduction of Customization
 - High speed synchronous imaging camera products
 - ISC-24
 - Image capture evaluation kit products
- Other products
 - IDMU
 - ILP
 - ILC
 - ILV
 - ILS
 - IPPA_G · IRPA_G
 - IPSA · IPPA
 - IDGC
 - IDPA
 - IDCA
 - IMC
 - IWDV-24
 - IWDV(S)-48
 - ISC
 - IJS
 - IJS-30M2-TP/SS
 - ILS-40M2-PI/SS
 - SAG
 - SLLUB
 - LLUB
 - IFC