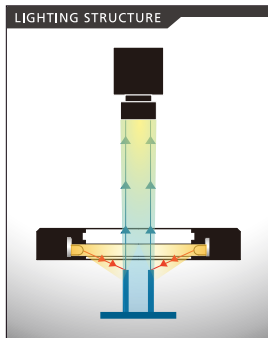


# Horizontal Opposed Irradiate Ring Illumination [IDRA-T Series]

Direct irradiate illumination from horizontal opposed directions  
Emphasize irregularities by illuminating from the horizontal direction

24V DC Models Available

- Applications**
- Semiconductor/Electronic components industry etc.
    - ➔ Inspection of microscopic scratch on chip components etc.
  - Can /Aluminum manufacturing industry etc.
    - ➔ Inspection of top surface edge etc.
  - FPD/Liquid crystal glass industry etc.
    - ➔ Inspection of dust/dirt on glass surfaces etc.



**Standard Size Lineup** Standard release in 8 sizes:  $\phi 78$  /  $\phi 84$  /  $\phi 96$  /  $\phi 122$  /  $\phi 152$  /  $\phi 176$  /  $\phi 206$  /  $\phi 450$ mm

## Imaging Example

It is possible to detect engraved characters and surface scratches without LED elements appearing in the image



IDRA-T78/46B-1



IDRA-T96/60DR-1

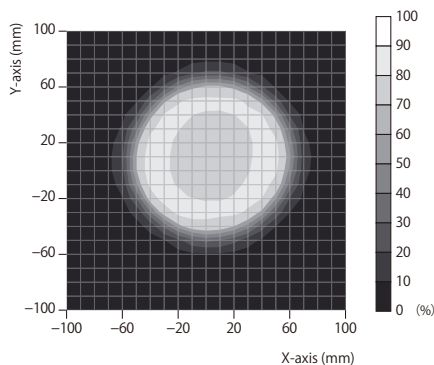


Imaging with a Direct Ring Illumination

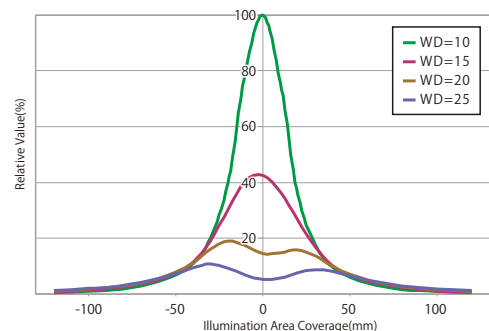


IDRA-T122/92DR-1

## Illuminance Distribution Chart(Ref.Value)



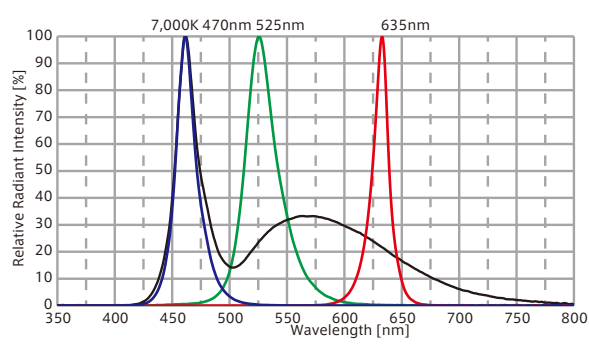
Uniform illumination is possible even from a close distance to the work surface  
Used illumination: IDRA-T176/140DW-1  
WD : 10mm



Even with changes in the working distance, the illumination area is almost limited.  
Used illumination: IDRA-T96/60DW-1

- 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 series 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
IDRA-T78/46□-1	DR	2.4	DC12V	C6	IDMU Series (P.193) ILP-30M2 (P.197) IDGC Series (P.209) and the others Strobe/Overdrive Controllers, etc.	1
	DW B G	2.9		FF		
IDRA-T84/54□-1	DR	3		C7		2
	DW B G	2.9		FF		
IDRA-T96/60□-1	DR	3.6		C7		3
	DW B G	3.6		FF		
IDRA-T122/92□-1	DR	4.2		C8		4
	DW B G	4.7		FF		
IDRA-T152/114□-1	DR	5.4		C8		5
	DW B G	5.8		FF		
IDRA-T176/140□-1	DR	7.2		CA		6
	DW B G	7.2		FF		
IDRA-T206/170□-1	DR	8.4		CA		7
	DW B G	8.7		FF		
IDRA-T450/400R-1	R	11.6		—		8
IDRA-T450/400□-1	DW B G	17.3		—		

★The emission color (DW=White,DR=Red,B=Blue,G=Green) is indicated by □ in the model table. ★A diffuser ring plate can be attached.(Optional)  
 ★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.  
 ★Custom sizes are also available aside from the ones listed above.

#### Singal Type Extension Cable For DC12V Illumination

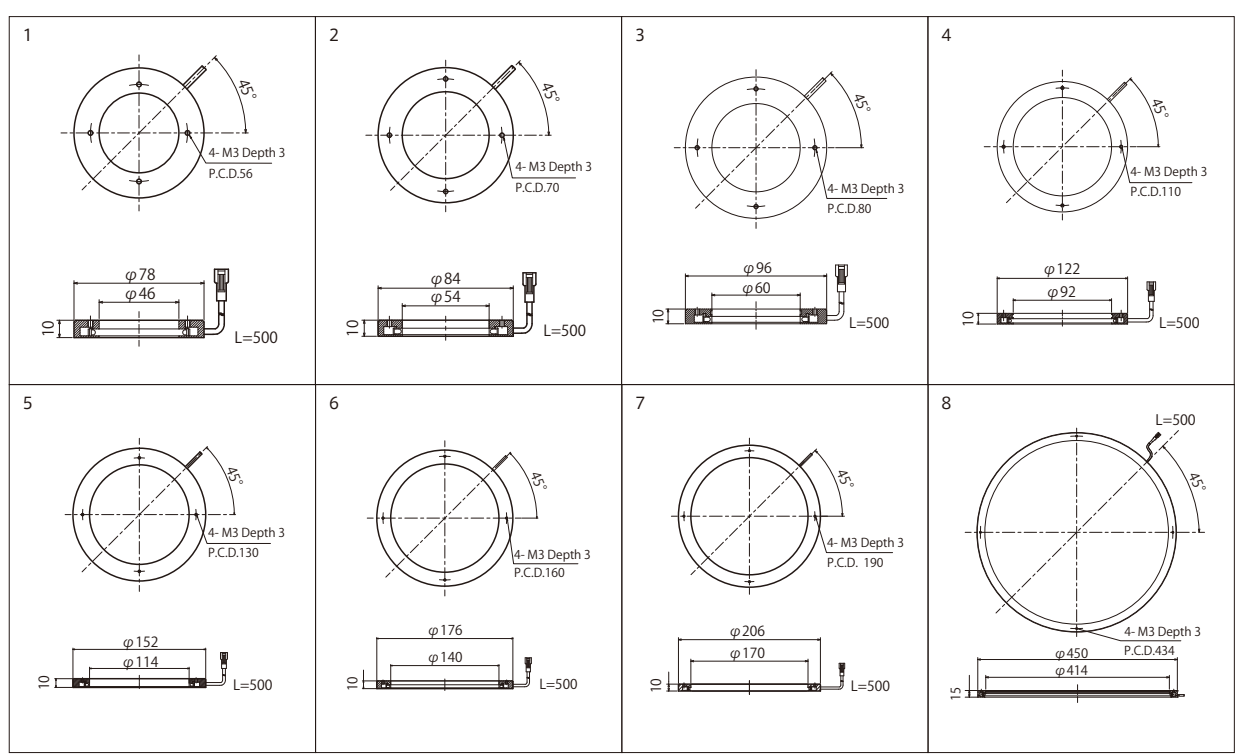
##### I-CB-S Series

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-LSRH
  - IDBB-LSRA
  - IDBB-LSRS
  - IDBB-LSRC
  - IDBB-LSRC
  - IDBB-RE
  - IDBB-RE
  - IDBA-RK
  - IDBH-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
  - IHMA-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
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  - IDHRA
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  - ILP
  - ILC
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  - ILS
- Controller products
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  - IPSA · IPPA
  - IDGC
  - IDPA
  - IDCA
  - IMC
  - IWDV-24
  - IWDV(S)-48
  - ISC
  - IJS
  - IUS-30M2-TP/SS
  - ILS-40M2-PI/SS
  - SAG
  - SLLUB
  - LLUB
  - IFIC