

Analyzes wavelengths to visualize subtle differences in color, materials, and contaminants.

Hyperspectral Imaging

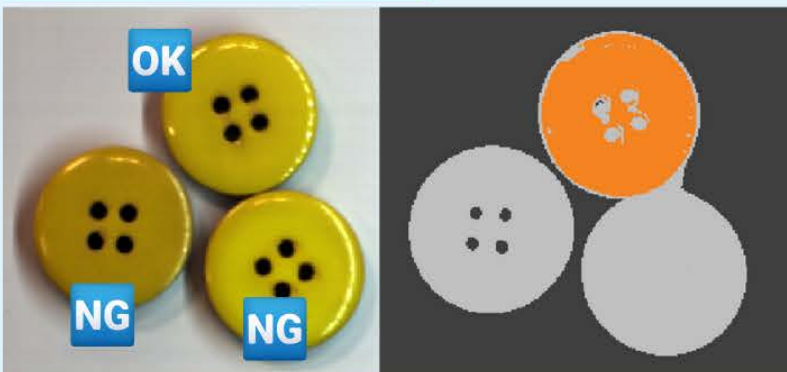
Hyperspectral Imaging is a technology for acquiring images using a hyperspectral camera that has the function of acquiring images with high wavelength resolution and corresponding illumination.

- Applications:**
- Vegetation & Agriculture
 - Phenotyping
 - Color & Density in Printing
 - Food Quality
 - Food Sorting
 - Food Inspection & Grading
 - Waste Sorting
 - Recycling

Application Example 1

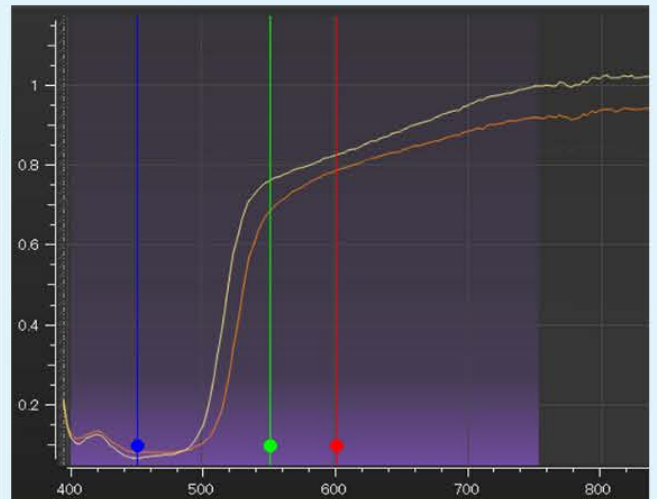
Color Evaluation

Button Color



Light Used: LED

Wavelength Band: 400–800 nm

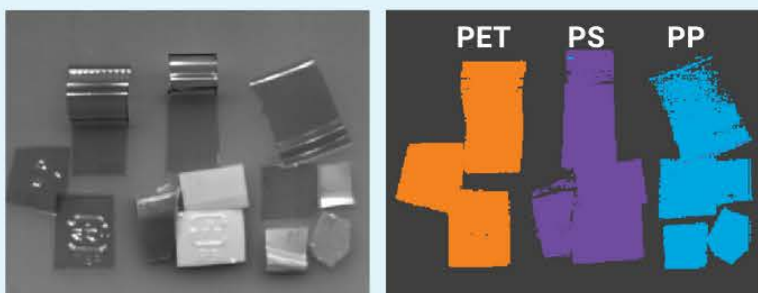


Determines subtle differences in color that are difficult to inspect by human eyes.

Application Example 2

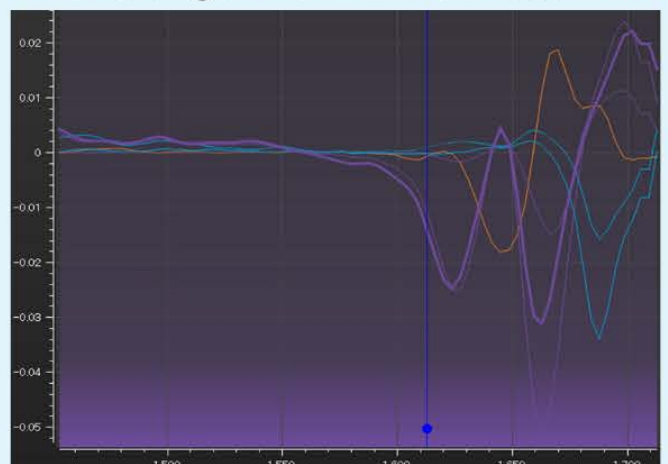
Material Analysis

Plastic Material



Light Used: Halogen lamp

Wavelength Band: 400–2500 nm



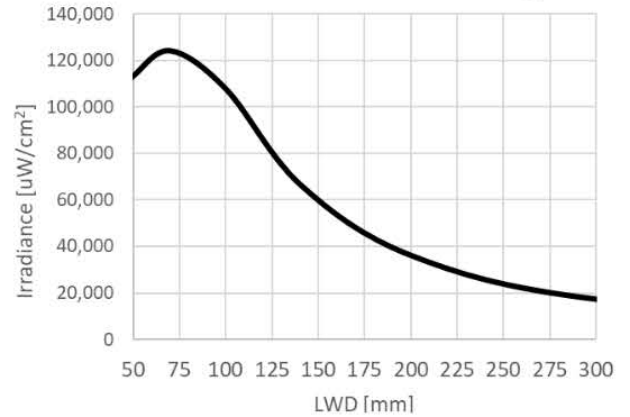
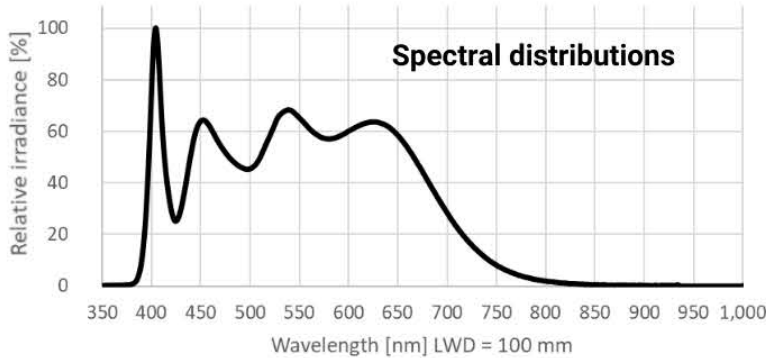
Analyzes differences of each transmittance of workpieces with unknown materials.

HLND-300W50-RFNFLSP



Wavelength band
400–800 nm

Benefit
Maintains a high level of irradiance across wide range of short working distances



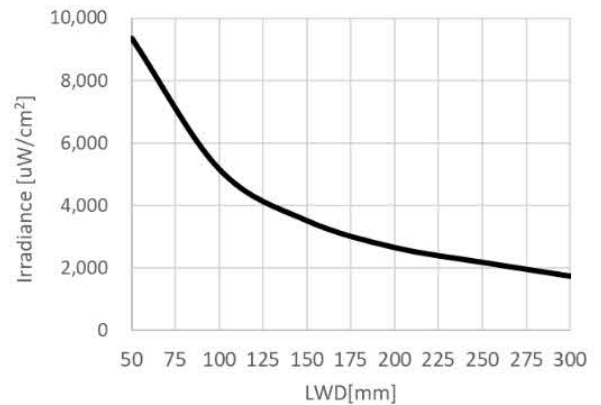
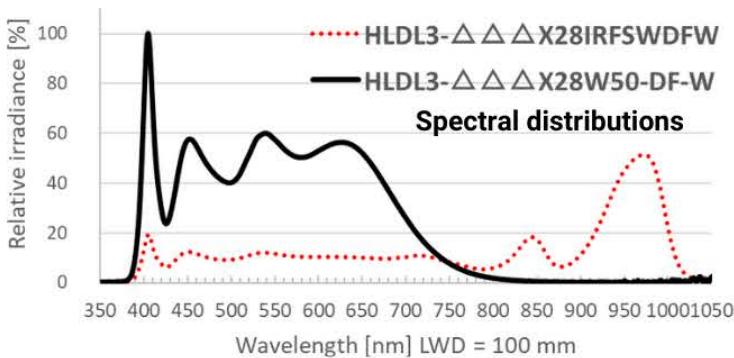
These values are reference measurements and are not guaranteed.

HLDL3-900X28W50-DF-W



Wavelength band
400–800 nm

Benefit
Quick and easy setting/
Cost effective



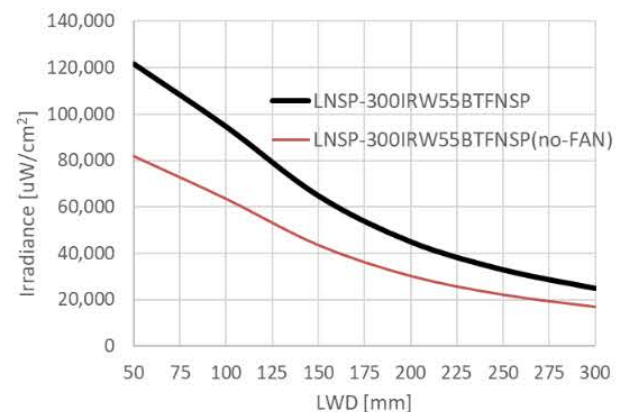
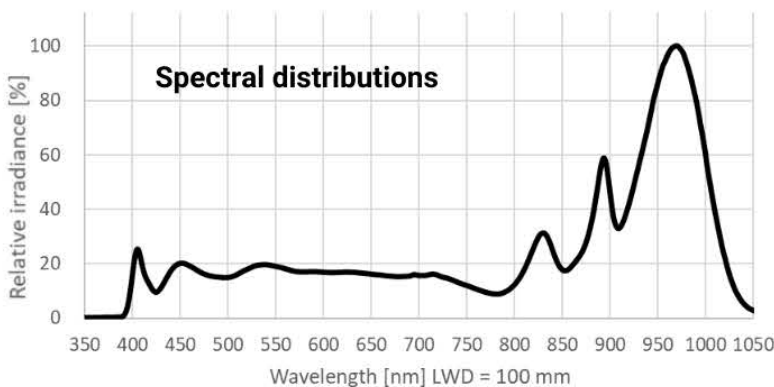
These values are reference measurements and are not guaranteed.

LNSP-300IRW55BTFNSP



Wavelength band
400–1000 nm

Benefit
Intensity adjustable for 4 spectral ranges per channel



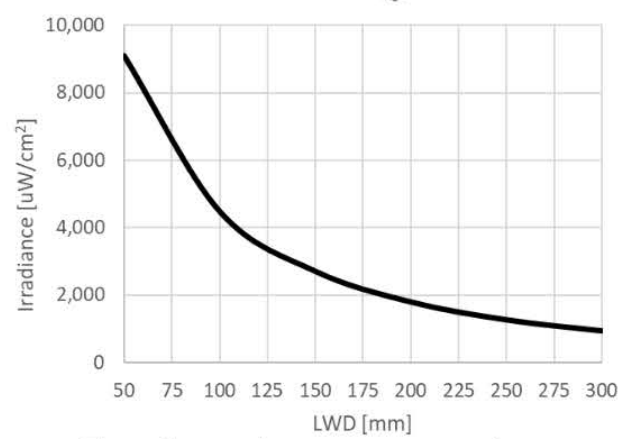
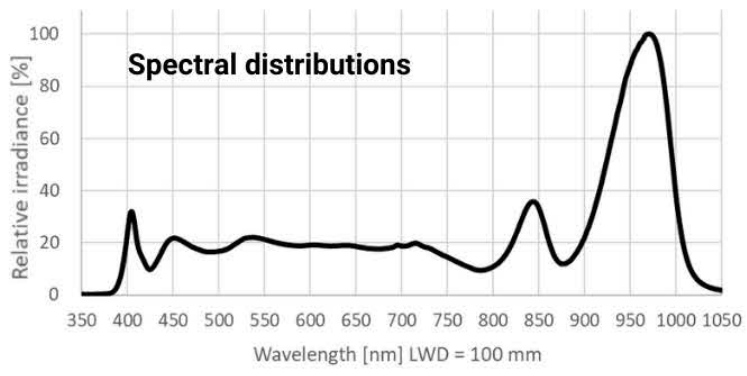
These values are reference measurements and are not guaranteed.

HLDL3-300X28IRFSWDFW



Wavelength band
400–1000 nm

Benefit
Quick and easy setting/
Cost effective



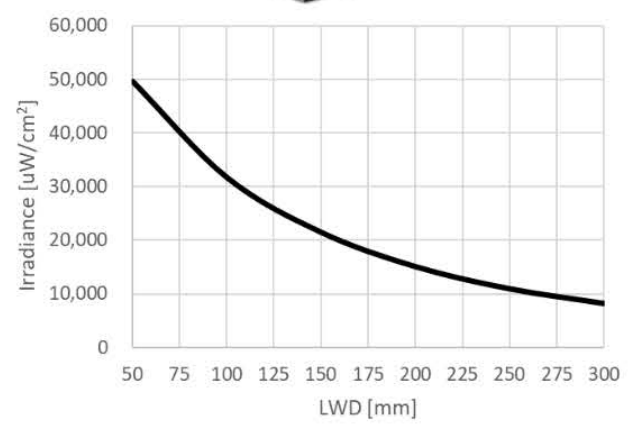
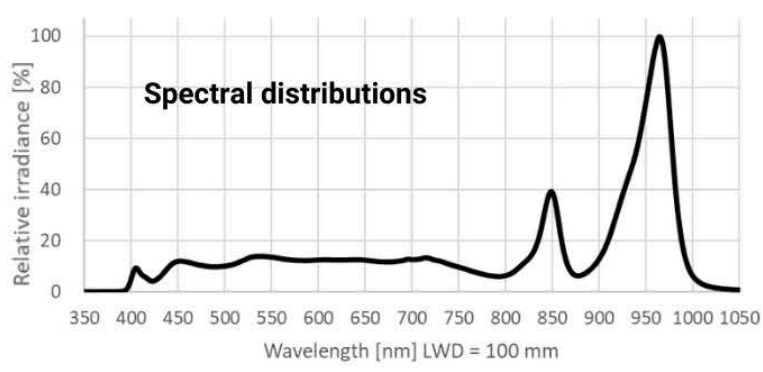
These values are reference measurements and are not guaranteed.

LNSP2-300IRW55-BTSP



Wavelength band
400–1000 nm

Benefit
Quick and easy setting



These values are reference measurements and are not guaranteed.

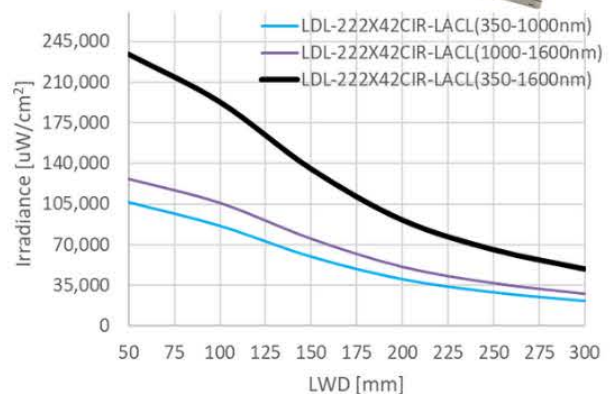
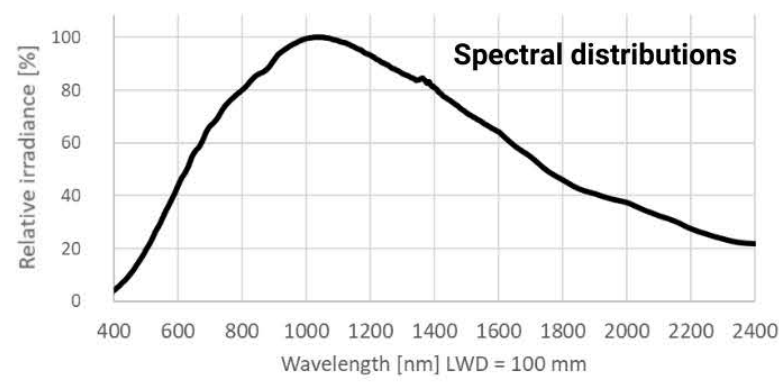
LDL-222X42CIR-LACL

Halogen lamp



Wavelength band
400–2500 nm

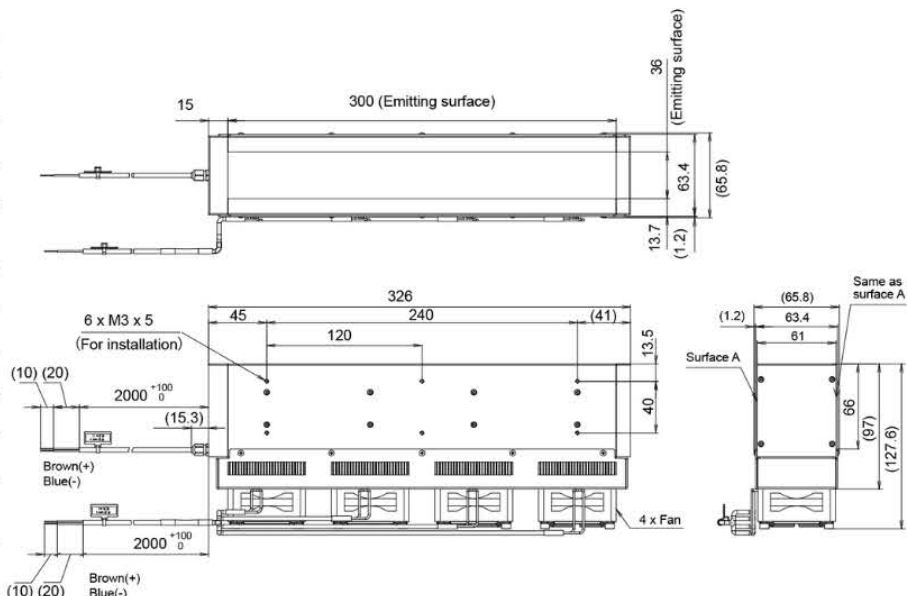
Benefit
Ultra wide bandwidth
covering the entire range
of a hyperspectral camera



These values are reference measurements and are not guaranteed.

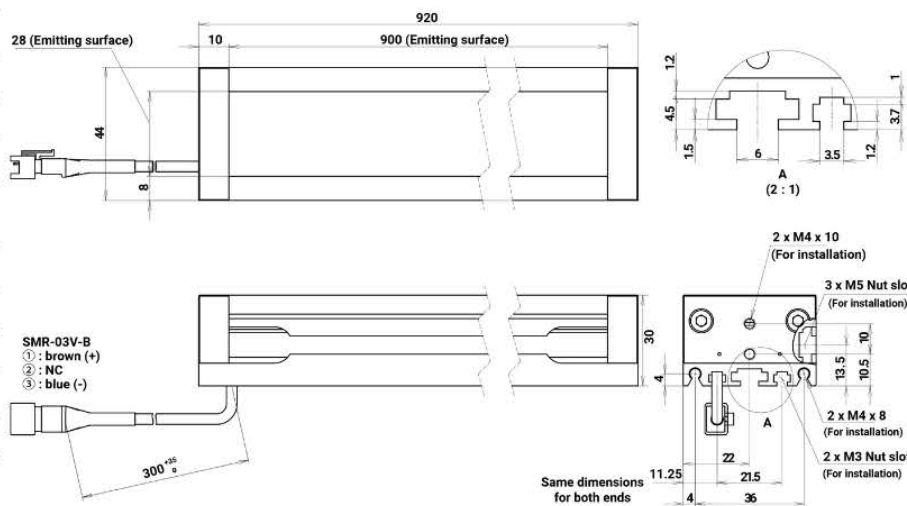
HLND-300W50-RFNFLSP

| | |
|------------------------------|-----------------------------------------------|
| Input Current | 1.34 A max. |
| Power Consumption | 49.0 W max. |
| Weight | Approx. 2.6 kg |
| LED Color | Natural Light |
| Correlated Color Temperature | Typ.5000K |
| Polarity & Signal | brown(+), blue(-) |
| Fan Rating | DC 24 V, 24 W max. |
| Operating Conditions | Temperature: 0 to 35°C |
| | Humidity: 20% to 85%RH |
| Storage Conditions | Temperature: -20 to 60°C |
| | Humidity: 20% to 85%RH (with no condensation) |
| Compliance | RoHS Directive, REACH Regulation |



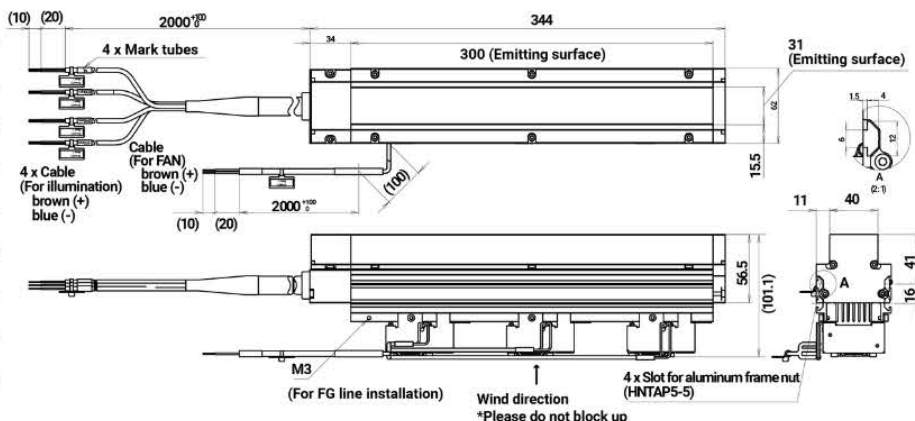
HLDL3-900X28W50-DF-W

| | |
|------------------------------|-----------------------------------------------|
| Input Voltage | DC 24 V max. |
| Power Consumption | 43.2 W max. |
| Current Consumption | 1.80 A max. |
| Weight | Approx. 1.86 kg |
| LED Color | Natural Light |
| Correlated Color Temperature | Typ.5000K |
| Connector | SM Connector (SMR-03V-B) |
| Polarity & Signal | 1: brown(+), 2: NC, 3: blue(-) |
| Operating Conditions | Temperature: 0 to 40°C |
| | Humidity: 20% to 85%RH |
| Storage Conditions | Temperature: -20 to 60°C |
| | Humidity: 20% to 85%RH (with no condensation) |
| Compliance | RoHS Directive, REACH Regulation |



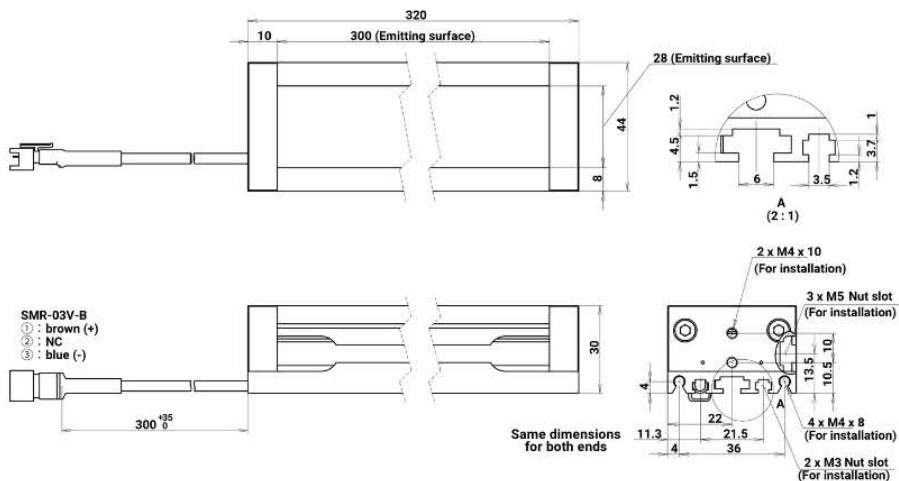
LNSP-300IRW55BTFNSP

| | |
|----------------------|----------------------------------------------------------------------------------|
| Input Current | 4.35 A (970 nm: 2.1 A, 890 nm: 0.3 A, 830 nm: 0.75 A, Natural light: 1.2 A) |
| Power Consumption | 60 W (970 nm: 22.995 W, 890 nm: 3.15 W, 830 nm: 4.388 W, Natural light: 29.16 W) |
| Weight | Approx. 1.6 kg |
| LED Color | Natural Light, IR |
| Peak Wavelength | Typ. 830 nm, 890 nm, 970 nm |
| Polarity & Signal | brown(+), blue(-) |
| Fan Rating | DC 24 V, 5.1 W max. |
| Operating Conditions | Temperature: 0 to 40°C |
| | Humidity: 20% to 85%RH |
| Storage Conditions | Temperature: -20 to 60°C |
| | Humidity: 20% to 85%RH (with no condensation) |
| Compliance | RoHS Directive, REACH Regulation |



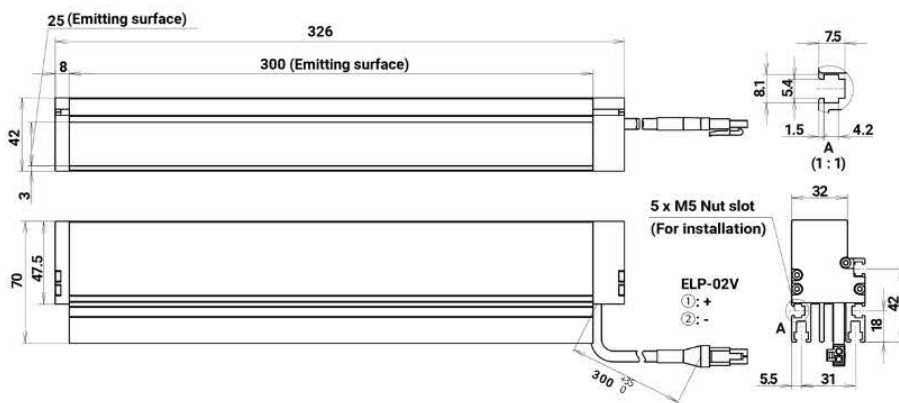
HLDL3-300X28IRFSWDFW

| | |
|----------------------|-----------------------------------------------|
| Input Voltage | DC 24 V max. |
| Power Consumption | 19 W max. |
| Current Consumption | 0.77 A max. |
| LED Color | Natural Light, IR |
| Connector | SM Connector (SMR-03V-B) |
| Polarity & Signal | 1: brown(+), 2: NC, 3: blue(-) |
| Operating Conditions | Temperature: 0 to 40°C |
| | Humidity: 20% to 85%RH |
| Storage Conditions | Temperature: -20 to 60°C |
| | Humidity: 20% to 85%RH (with no condensation) |
| Compliance | RoHS Directive, REACH Regulation |



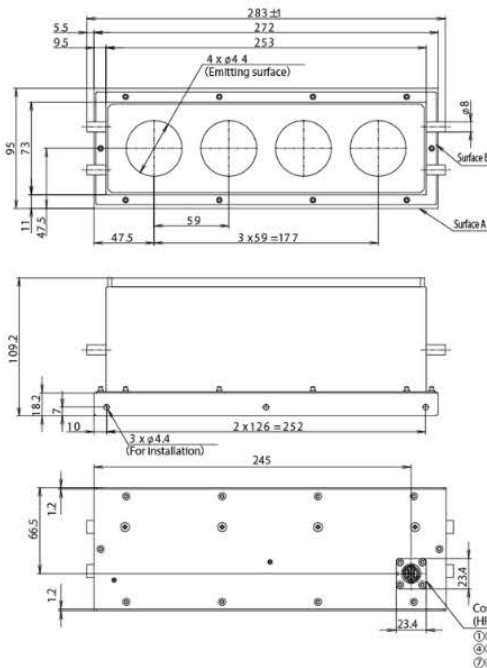
LNSP2-300IRW55-BTSP

| | |
|----------------------|-----------------------------------------------|
| Input Voltage | DC 24 V max. |
| Power Consumption | 25.0 W max. |
| Current Consumption | 1.04 A max. |
| LED Color | Natural Light, IR |
| Connector | EL Connector (ELP-02V) |
| Polarity & Signal | 1: (+), 2: (-) |
| Operating Conditions | Temperature: 0 to 40°C |
| | Humidity: 20% to 85%RH |
| Storage Conditions | Temperature: -20 to 60°C |
| | Humidity: 20% to 85%RH (with no condensation) |
| Compliance | RoHS Directive, REACH Regulation |

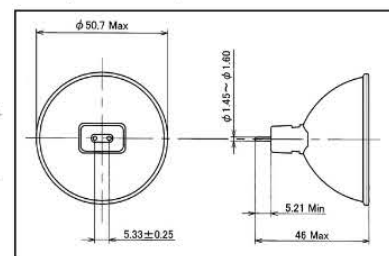


LDL-222X42CIR-LACL

| | |
|----------------------|-----------------------------------------------|
| Input Power (Rating) | DC 12 V max. |
| Power Consumption | 87 W max. |
| Input Power (Range) | DC 11.4 to 12 V |
| Weight | Approx. 1.74 kg |
| Connector | HR34B-12WRA-10P |
| Operating Conditions | Temperature: 0 to 40°C |
| | Humidity: 20% to 85%RH |
| Storage Conditions | Temperature: -20 to 60°C |
| | Humidity: 20% to 70%RH (with no condensation) |
| Compliance | RoHS Directive, REACH Regulation |



Option: Replacement Bulb



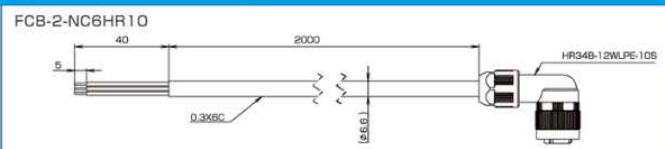
Band-pass Filters

F-BP Series

These filters transmit light in a specific wavelength region



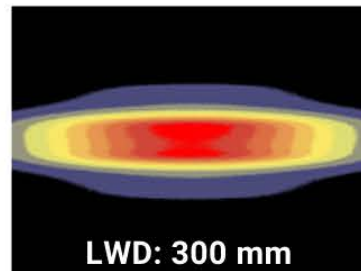
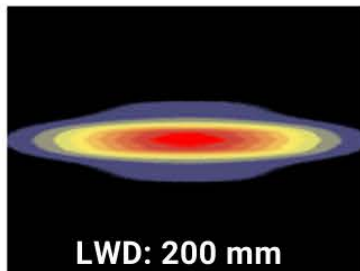
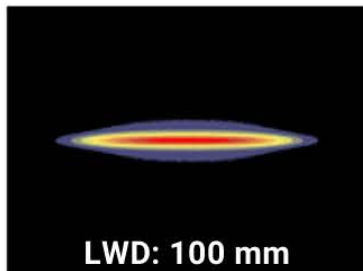
Option Cable



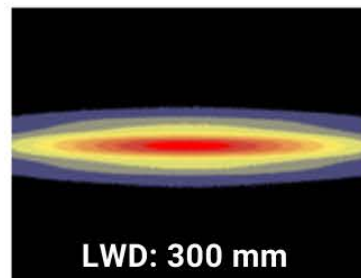
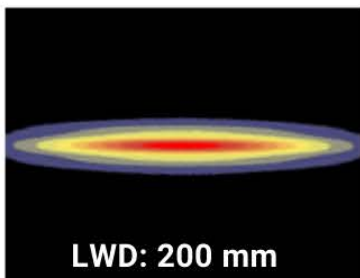
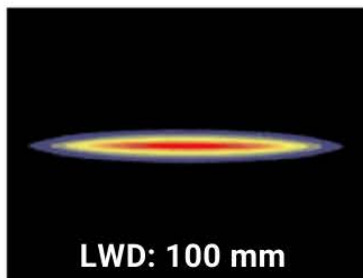
Uniformity

FOV: 500 x 375mm

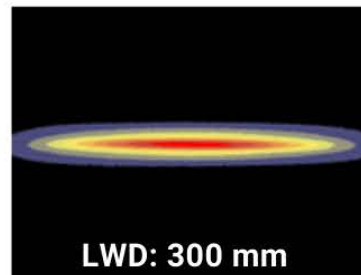
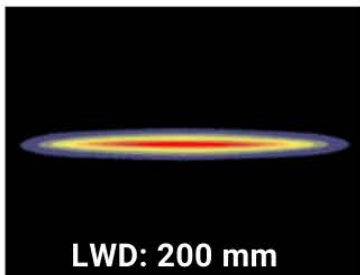
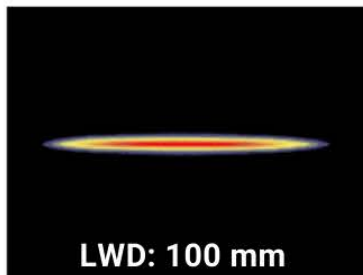
HLND-300W50-RFNFLSP



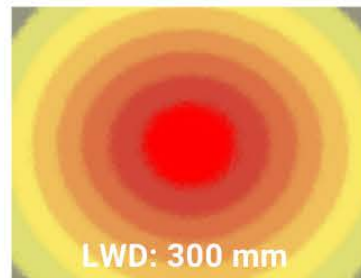
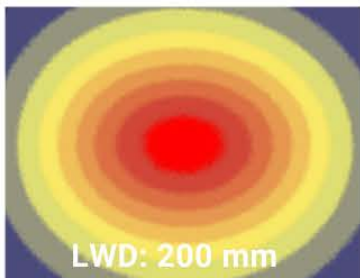
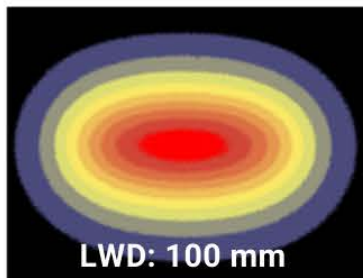
LNSP2-300IRW55-BTSP



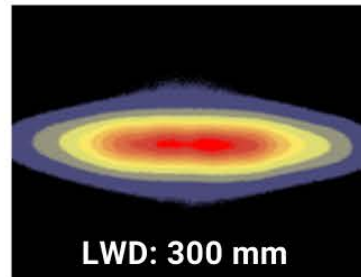
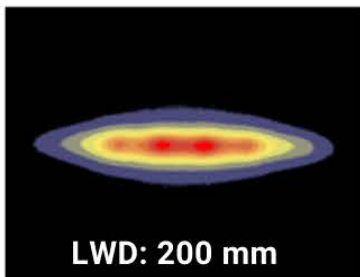
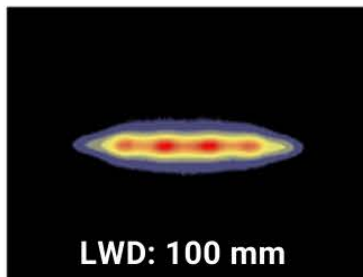
LNSP-300IRW55BTFNSP



HLDL3-300X28IRFSWDFW



LDL-222X42CIR-LACL



NEW

LED Custom Light

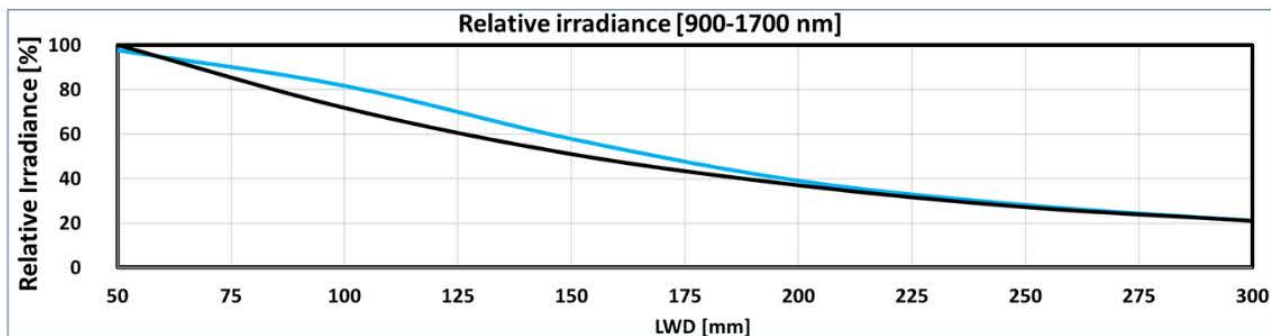
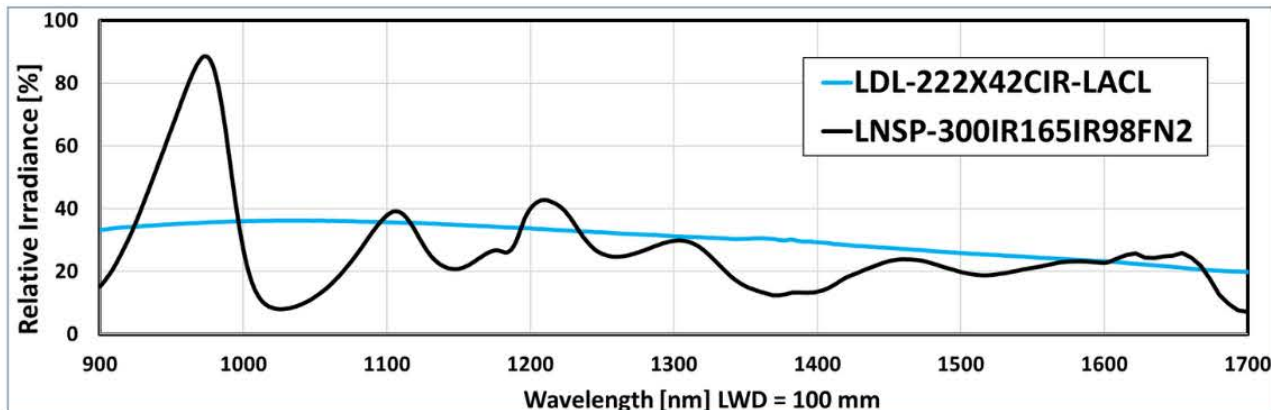
LNSP-300IR165IR98FN2

LED

SWIR

Wavelength band
900–1700 nm

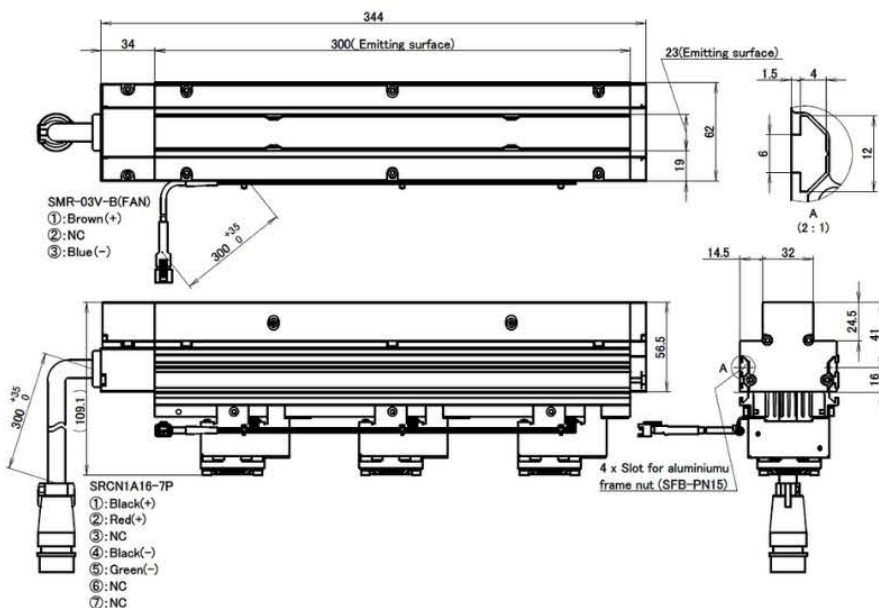
Benefit
LEDs can replace halogen lamps to be used in SWIR range



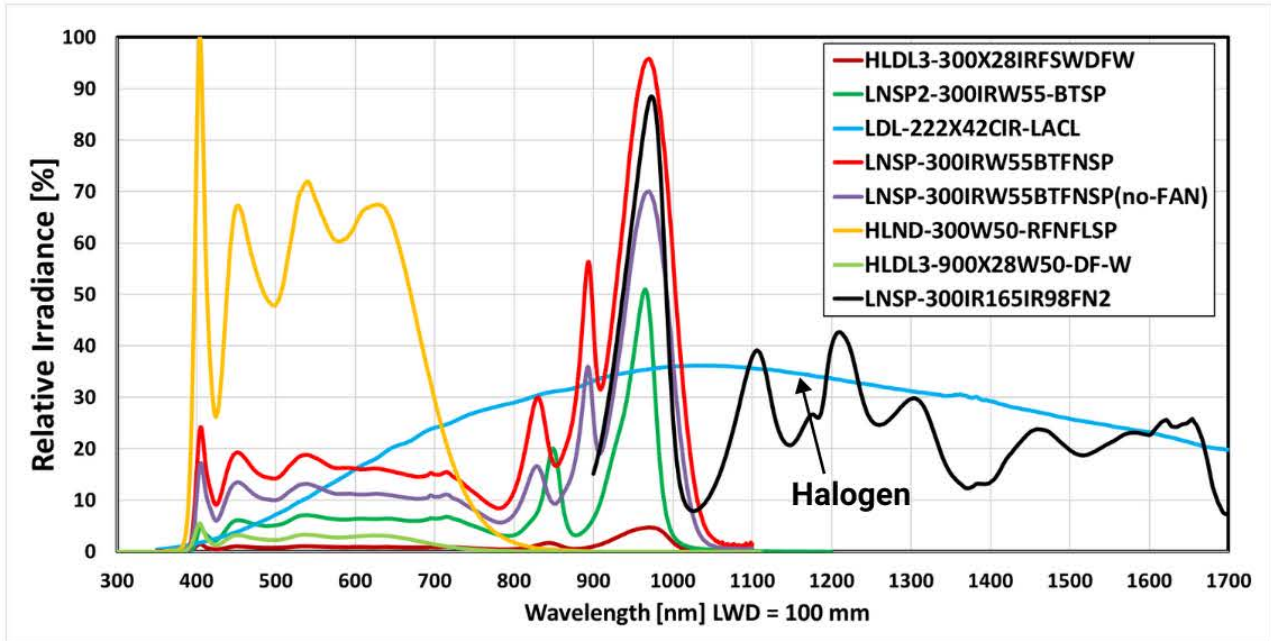
These values are reference measurements and are not guaranteed.

Specifications

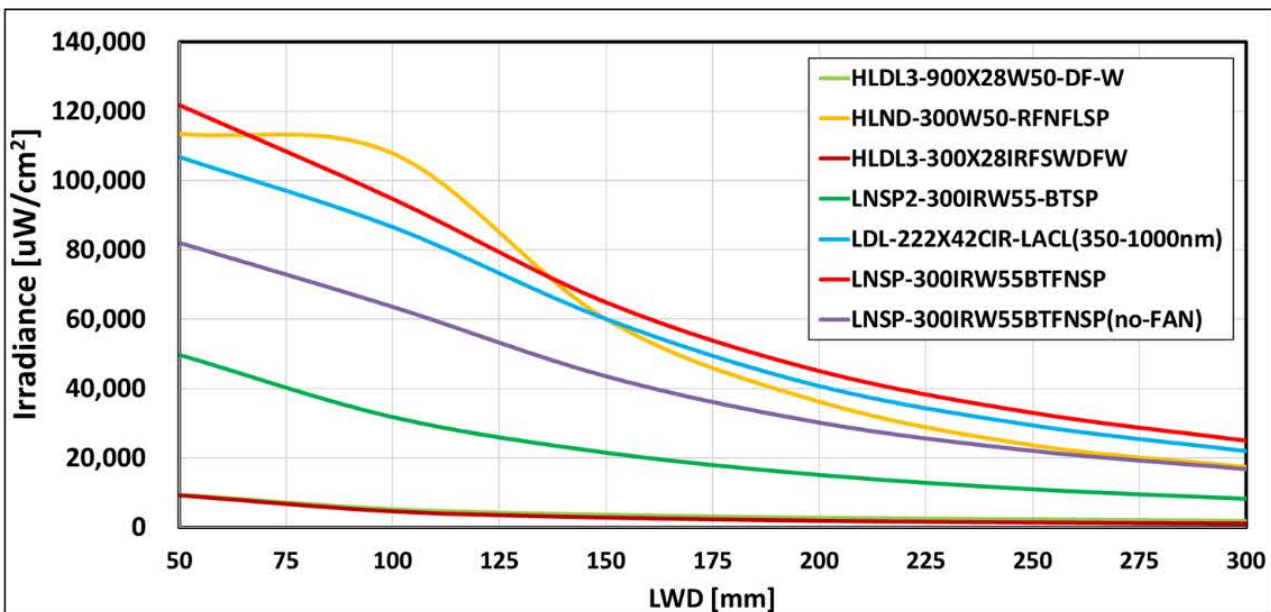
| | |
|---------------------------|----------------------------------------------------------------------|
| Input Voltage | DC 24 V max. |
| Power Consumption | 236 W max. |
| Current Consumption | 9.80 A max. |
| Weight | Approx. 1.9 kg |
| LED Color | IR |
| Connector (Light) | Metal Connector (SRCN1A16-7P) |
| Polarity & Signal (Light) | 1: white(+), 2: red(+), 3: NC, 4: black(-), 5: green(-), 6: NC, 7:NC |
| Connector (Fan) | SM Connector (SMR-03V-B) |
| Polarity & Signal (Fan) | 1: brown(+), 2: NC, 3: blue(-) |
| Fan Rating | DC 24 V, 20 W |
| Operating Conditions | Temperature: 0 to 40°C |
| | Humidity: 20% to 85%RH |
| Storage Conditions | Temperature: -20 to 60°C |
| | Humidity: 20% to 85%RH (with no condensation) |
| Compliance | RoHS Directive, REACH Regulation |



Comparison of Spectral Distributions



Irradiance Comparison (380-1000nm)



These values are reference measurements and are not guaranteed.



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