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**Data Sheet**

August 3, 2026

KIMMON

# Kimmon IK Series He-Cd Laser Model IK3083R-DB Calibrated

Alias: IK3083R-D; IK3083RDB; IK3083R D; IK3083R DB Beam Diameter  $1/e^2$ :  $< 1.0$  mm (\* measured at 100 mm from output coupler) Beam Pointing Stability (25 °C constant):  $\leq \pm 25$   $\mu$ rad Power Stability (25 °C constant, 4 hours):  $\leq \pm 2.0\%$



|                                   |                                                                                                                            |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| MODEL<br><b>Kimmon IK3083R-DB</b> | CALIBRATION<br><b>Available on request</b>                                                                                 |
| CONDITION<br><b>Used</b>          | STATUS<br><b>In stock</b>                                                                                                  |
| RFQ / SKU<br><b>IK3083R-DB</b>    | LISTING<br><a href="https://aumictechlabs.com/products/ik3083r-db-2/">https://aumictechlabs.com/products/ik3083r-db-2/</a> |

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SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

## This unit

The Kimmon IK Series IK3083R-DB is a calibrated Helium-Cadmium gas laser delivering stable, coherent UV light at 325 nm for scientific and industrial measurement, inspection, and materials processing. This Class 3B continuous-wave system generates 10 mW of output power in a diffraction-limited TEM00 mode with exceptional beam quality and pointing stability. Technical Specifications Optical Performance Wavelength: 325 nm (UV) Output Power (CW): 10 mW Transverse Mode: TEM00 Polarization: Linear,  $> 500:1$  ratio Beam Diameter ( $1/e^2$ ):  $< 1.0$  mm at 100 mm from output coupler Beam Divergence:  $< 0.4$  mrad Beam Pointing Stability:  $\pm 25$   $\mu$ rad (at 25°C constant temperature) Power Stability:  $\pm 2\%$  over 4 hours at 25°C;  $< 20\%$  across 10–40°C operating range RMS Noise: 2.0% RMS; 500:1 ratio enables compatibility with polarization-sensitive instrumentation. Tight beam pointing stability of  $\pm 25$   $\mu$ rad supports long-distance

alignment in metrology and interferometric systems. Helium-cadmium gas discharge provides exceptional wavelength stability essential for spectroscopy and calibration work. Typical Applications Photoluminescence, Raman spectroscopy, flow cytometry, fluorescence imaging, semiconductor inspection, holography, lithography, photopolymer exposure, interferometry, defect inspection, precision measurement, and materials processing. Compatibility & Integration Laser head and power supply integrate via internal control circuit board, enabling straightforward head replacement. Power supply model KP2014C is compatible with this He-Cd system. Operating temperature: 10–40°C; Storage: -10 to 50°C.

## Features & description

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From manufacturer datasheet

### Features

• Wavelength: 325 nm • Output power: 10 mW • Transverse mode: TEM00 • Polarization: Linear, ratio > 500:1 • Noise (P-P, 30 kHz–2 MHz): < 6% • Beam diameter ( $1/e^2$ ): < 1.0 mm (at 100 mm from output coupler) • Beam divergence: < 0.4 mrad • Beam pointing stability:  $\leq \pm 25 \mu\text{rad}$  (at 25 °C constant temperature) • Power stability:  $\leq \pm 2.0\%$  (4 hours at 25 °C); < 20% over 10–40 °C • Warm-up to 90% power: 20 minutes • Laser class: 3B / IIIb

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### Polarization Ratio: > 500:1

Noise, P-P @ 30 kHz–2 MHz: < 6% Beam Diameter  $1/e^2$ : < 1.0 mm (\* measured at 100 mm from output coupler) Beam Divergence: < 0.4 mrad Beam Pointing Stability (25 °C constant):  $\leq \pm 25 \mu\text{rad}$  Warm-Up Time (90% power): 20 minutes Power Stability (25 °C constant, 4 hours):  $\leq \pm 2.0\%$  Power Stability (10–40 °C): < 20% Environmental Operating: Temperature 10–40 °C; Humidity  $\leq 90\%$  RH (non-condensing) Storage: Temperature –10–50 °C; Humidity  $\leq 90\%$  RH (non-condensing) Shock (with Kimmon packaging): 20 G (vertical direction) Physical (IK-D head dimensions per datasheet) Dimensions (W×H×L): 146 × 197 × 850 mm Weight: 16.0 kg Laser Class: 3B / IIIb Operational Notes Observe Class 3B laser safety (eyewear, interlocks, beam containment). Calibrated units should retain the calibration certificate for power and wavelength verification. DB vsDpackaging/power-supply differences do not change the published optical head table above; confirm power-supply configuration on the installed system label.

## IK3083RDB Characteristics / Specifications

| PARAMETER                         | VALUE                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                             | IK3083R-DB                                                                                                                                                                                                                                                                                                                                                            |
| Manufacturer                      | Kimmon Koha (Kimmon)                                                                                                                                                                                                                                                                                                                                                  |
| Instrument Type                   | He-Cd Laser (IK Series)                                                                                                                                                                                                                                                                                                                                               |
| Alias                             | IK3083R-D; IK3083RDB; IK3083R D; IK3083R DB Optical                                                                                                                                                                                                                                                                                                                   |
| Wavelength                        | 325 nm                                                                                                                                                                                                                                                                                                                                                                |
| Power                             | 10 mW                                                                                                                                                                                                                                                                                                                                                                 |
| Transverse Mode                   | TEM00                                                                                                                                                                                                                                                                                                                                                                 |
| Polarization                      | Linear, ratio > 500:1                                                                                                                                                                                                                                                                                                                                                 |
| Polarization Ratio                | > 500:1                                                                                                                                                                                                                                                                                                                                                               |
| Beam Divergence                   | < 0.4 mrad                                                                                                                                                                                                                                                                                                                                                            |
| Power Stability (                 | 40 °C): < 20% Environmental                                                                                                                                                                                                                                                                                                                                           |
| Operating                         | Temperature 10–40 °C; Humidity ≤ 90% RH (non-condensing)                                                                                                                                                                                                                                                                                                              |
| Storage                           | Temperature –10–50 °C; Humidity ≤ 90% RH (non-condensing)                                                                                                                                                                                                                                                                                                             |
| Shock (with Kimmon packaging)     | 20 G (vertical direction) Physical (IK-D head dimensions per datasheet)                                                                                                                                                                                                                                                                                               |
| Weight                            | 16.0 kg                                                                                                                                                                                                                                                                                                                                                               |
| Laser Class                       | 3B / IIIb Operational Notes Observe Class 3B laser safety (eyewear, interlocks, beam containment). Calibrated units should retain the calibration certificate for power and wavelength verification. DB vsDpackaging/power-supply differences do not change the published optical head table above; confirm power-supply configuration on the installed system label. |
| Output power                      | 10 mW                                                                                                                                                                                                                                                                                                                                                                 |
| Noise (P-P, 30 kHz–2 MHz)         | < 6%                                                                                                                                                                                                                                                                                                                                                                  |
| Beam diameter (1/e <sup>2</sup> ) | < 1.0 mm (at 100 mm from output coupler)                                                                                                                                                                                                                                                                                                                              |
| Beam pointing stability           | ≤ ±25 µrad (at 25 °C constant temperature)                                                                                                                                                                                                                                                                                                                            |
| Power stability                   | ≤ ±2.0% (4 hours at 25 °C); < 20% over 10–40 °C                                                                                                                                                                                                                                                                                                                       |
| Warm-up to 90% power              | 20 minutes                                                                                                                                                                                                                                                                                                                                                            |

| PARAMETER    | VALUE                     |
|--------------|---------------------------|
| Humidity     | ≤ 90% RH (non-condensing) |
| Warm-up time | (90% power): 20 minutes   |

# General Specifications & Supplementary Characteristics

| PARAMETER                     | VALUE                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Humidity                      | ≤ 90% RH (non-condensing)                                                                                                                                                                                                                                                                                                                                             |
| Operating                     | Temperature 10–40 °C; Humidity ≤ 90% RH (non-condensing)                                                                                                                                                                                                                                                                                                              |
| Storage                       | Temperature –10–50 °C; Humidity ≤ 90% RH (non-condensing)                                                                                                                                                                                                                                                                                                             |
| Shock (with Kimmon packaging) | 20 G (vertical direction) Physical (IK-D head dimensions per datasheet)                                                                                                                                                                                                                                                                                               |
| Weight                        | 16.0 kg                                                                                                                                                                                                                                                                                                                                                               |
| Laser Class                   | 3B / IIIb Operational Notes Observe Class 3B laser safety (eyewear, interlocks, beam containment). Calibrated units should retain the calibration certificate for power and wavelength verification. DB vsDpackaging/power-supply differences do not change the published optical head table above; confirm power-supply configuration on the installed system label. |

# Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

performance of theDmodel.

Applications

UV fluorescence, lithography and photoresist exposure research, spectroscopy, calibration of UV detectors/optics, and other TEM00 325 nm source applications requiring stable He-Cd output.

Key Features

- Wavelength: 325 nm
- Output power: 10 mW
- Transverse mode: TEM00
- Polarization: Linear, ratio > 500:1
- Noise (P-P, 30 kHz–2 MHz): < 6%
- Beam diameter (1/e²): < 1.0 mm (at 100 mm from output coupler)
- Beam divergence: < 0.4 mrad
- Beam pointing stability: ≤ ±25 µrad (at 25 °C constant temperature)
- Power stability: ≤ ±2.0% (4 hours at 25 °C); < 20% over 10–40 °C
- Warm-up to 90% power: 20 minutes
- Laser class: 3B / IIIB

Technical Specifications

### Technical Specifications

| PARAMETER       | VALUE                                       |
|-----------------|---------------------------------------------|
| Model           | IK3083R-DB                                  |
| Manufacturer    | Kimmon Koha (Kimmon)                        |
| Instrument Type | He-Cd Laser (IK Series)                     |
| Alias           | IK3083R-D; IK3083RDB; IK3083R D; IK3083R DB |

Optical

### Specifications

| PARAMETER          | VALUE   |
|--------------------|---------|
| Wavelength         | 325 nm  |
| Power              | 10 mW   |
| Transverse Mode    | TEM00   |
| Polarization       | Linear  |
| Polarization Ratio | > 500:1 |

Noise, P-P @ 30 kHz–2 MHz: < 6%

Beam Diameter 1/e²: < 1.0 mm (\* measured at 100 mm from output coupler)

Beam Divergence: < 0.4 mrad

Beam Pointing Stability (25 °C constant): ≤ ±25 µrad

Warm-Up Time (90% power): 20 minutes

Power Stability (25 °C constant, 4 hours): ≤ ±2.0%

Power Stability (10–40 °C): < 20%

Environmental

Environmental

| PARAMETER                     | VALUE                                                     |
|-------------------------------|-----------------------------------------------------------|
| Operating                     | Temperature 10–40 °C; Humidity ≤ 90% RH (non-condensing)  |
| Storage                       | Temperature –10–50 °C; Humidity ≤ 90% RH (non-condensing) |
| Shock (with Kimmon packaging) | 20 G (vertical direction)                                 |

Physical (IK-D head dimensions per datasheet)  
Dimensions (W×H×L): 146 × 197 × 850 mm  
Weight: 16.0 kg  
Laser Class: 3B / IIIB

Operational Notes  
Observe Class 3B laser safety (eyewear, interlocks, beam containment). Calibrated units should retain the calibration certificate for power and wavelength verification. DB vsDpackaging/power-supply differences do not change the published optical head table above; confirm power-supply configuration on the installed system label.

## Laser Safety

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laser safety (eyewear, interlocks, beam containment). Calibrated units should retain the calibration certificate for power and wavelength verification. DB vsDpackaging/power-supply differences do not change the published optical head table above; confirm power-supply configuration on the installed system label.

### Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: [sales@aumictech.com](mailto:sales@aumictech.com) · +1 (484) 841-9341

#### Aumictech

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NIST-traceable calibration · SAM registered ·  
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NAICS 423690 · 811210 · 541380  
Generated August 3, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.