

# UM-B

5 nW - 25 mW, Radiometer for Ultra-Low Power Measurements



## KEY FEATURES

- 1. **VERY LOW NOISE LEVEL**  
Noise levels of a photo detector, but with the large bandwidth of a pyroelectric:
  - Down to 5 nW when using the Analog Power Module (APM)
- 2. **VERY HIGH RESPONSIVITY**  
Up to 20 000 V/W when using the Analog Power Module (APM)
- 3. **VERY LARGE BANDWIDTH**  
From DUV to FIR thanks to pyroelectric technology
- 4. **SMART INTERFACE**  
Containing all the calibration data
- 5. **NEW INCLUDES AN ISOLATING TUBE TO BLOCK UNDESIRED NOISE FROM THE ENVIRONMENT.**

## AVAILABLE MODELS



UM9B-BL  
(9 mm-Organic Black)

## ACCESSORIES



Stand with Delrin Post  
(Model Number: 200428)



Fiber Adaptors & Connectors  
(FC, ST or SMA)



APM Analog Power Supply  
(Model Number: 201848)



SDC-500 Digital  
Optical Chopper

*This product cannot be used with DB-15 extension cables*

## SEE ALSO

|                         |     |
|-------------------------|-----|
| TECHNICAL DRAWINGS      | 96  |
| COMPATIBLE MONITORS     |     |
| MAESTRO                 | 20  |
| M-LINK                  | 32  |
| LIST OF ALL ACCESSORIES | 194 |

## APPLICATION NOTE

|                                 |                        |
|---------------------------------|------------------------|
| SDC-500 DIGITAL OPTICAL CHOPPER | <a href="#">202154</a> |
| IR WINDOWS                      | <a href="#">202192</a> |

MONITORS

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTO DETECTORS

THZ DETECTORS

OEM DETECTORS

SPECIAL PRODUCTS

BEAM DIAGNOSTICS

## UM-B

CE NIST\*  
Traceable

\*Also traceable to NRC-CNRC

## SPECIFICATIONS

|                                         | UM9B-BL-L-D0                  | UM9B-BL-D0                      |
|-----------------------------------------|-------------------------------|---------------------------------|
| <b>MAX AVERAGE POWER</b>                | 200 $\mu$ W                   | 20 mW (MAESTRO), 25 mW (M-LINK) |
| <b>EFFECTIVE APERTURE</b>               | 9 mm $\varnothing$            |                                 |
| <b>COMPATIBLE MONITORS</b>              | APM                           | Power Monitors                  |
| <b>MEASUREMENT CAPABILITY</b>           | With APM                      | With Monitor                    |
| Spectral Range *                        | 0.1 - 20 $\mu$ m              | 0.1 - 20 $\mu$ m                |
| Maximum Measurable Power                | 200 $\mu$ W                   | 20 mW (MAESTRO), 25 mW (M-LINK) |
| Noise Equivalent Power (RMS)            | 5 nW                          | 300 nW                          |
| Rise Time (0-100%)                      | $\leq 0.2$ s                  | $\leq 0.2$ s                    |
| Sensitivity                             | 20 000 V/W                    | 120 V/W                         |
| Calibration Uncertainty                 | $\pm 4$ % @ 1064 nm           | $\pm 4$ % @ 1064 nm             |
| Chopper Frequency <sup>a</sup>          | 5 $\pm$ 1 Hz                  | 10 $\pm$ 1 Hz                   |
| <b>DAMAGE THRESHOLDS</b>                |                               |                                 |
| Maximum Average Power Density (1064 nm) | 50 mW/cm <sup>2</sup>         | 50 mW/cm <sup>2</sup>           |
| <b>PHYSICAL CHARACTERISTICS</b>         |                               |                                 |
| Effective Aperture                      | 9 mm $\varnothing$            |                                 |
| Sensor                                  | Pyroelectric                  |                                 |
| Absorber                                | BL                            |                                 |
| Dimensions                              | 38.1 $\varnothing$ X 26.2D mm |                                 |
| Weight                                  | 91 g                          |                                 |
| <b>ORDERING INFORMATION</b>             | With APM                      | With Monitor                    |
| Product Name                            | UM9B-BL-L-D0                  | UM9B-BL-D0                      |
| Product Number (without stand)          | 202241                        | 202024                          |

Specifications are subject to change without notice // Compatible stand : P/N 200428

\* For the calibrated spectral range, see the user manual.

a. SDC-500 Digital Optical Chopper sold separately.

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