

# DSR600-PDE

## DSR600-PDE Photon Detection Efficiency System

DSR600-PDE measures photon detection efficiency versus wavelength by comparing a photon-counting detector with a calibrated reference through an integrating sphere. Supports SPAD, SiPM, PMT and other single-photon-sensitive detectors.

Best for: Spectral PDE calibration and comparison of photon-counting detectors.

**300–1100 nm**

Standard wavelength range

**To 2500 nm**

Extended option

**PDE, SR & EQE**

Measurements

**Si / InGaAs**

Reference detectors

*Representative DSR600 platform, also used by the source for the DSR600-PDE. Photon-counting hardware depends on configuration.*

### Overview

A monochromator and integrating sphere provide uniform monochromatic light to the calibrated reference and device under test. Reference power and active-area ratio establish incident photon flux, which is compared with the recorded pulse count.

Scanning wavelength yields the PDE spectrum, peak efficiency and peak wavelength. The calibrated detector range and counting electronics must match the device being measured.

### Features

- Wavelength-resolved PDE, spectral responsivity and EQE
- Calibrated silicon and InGaAs reference-detector options
- Configurable pulse counting, source meter and bias supplies

### Applications

- SPAD and Geiger-mode APD calibration
- SiPM and multi-pixel photon-counter evaluation
- Photon-counting PMT and superconducting detector characterisation

## Specifications and configuration

| Optical and electrical configuration |                                                                   |
|--------------------------------------|-------------------------------------------------------------------|
| Wavelength range                     | 300–1100 nm; extendable to 2500 nm with appropriate configuration |
| Si reference detector                | 300–1100 nm with calibration certificate                          |
| InGaAs reference detector            | 900–1700 nm or 900–2500 nm with calibration certificate           |
| Acquisition options                  | 2 or 4 channels; 4 ns, 2 ns, 1.14 ns, 800 ps or 400 ps options    |
| Published sampling-rate option       | 2.5 GS/s                                                          |
| Source meter                         | 10 nA–1 A range; 100 fA resolution; 0–200 V source                |
| Programmable supply                  | Dual-channel 0–32 V; 1 mV resolution                              |

## Configuration and quotation

Share the sample size, wavelength range and required measurements to select the source, optics and acquisition modules.

[info@precisometer.com](mailto:info@precisometer.com)

[www.precisometer.com/spectroscopy/photoelectric-testing/dsr600-pde](http://www.precisometer.com/spectroscopy/photoelectric-testing/dsr600-pde)