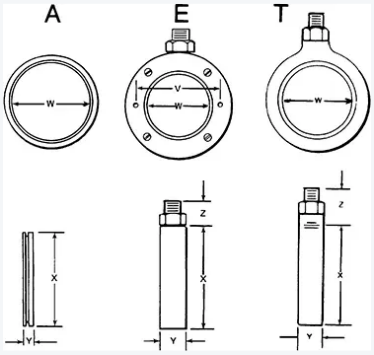
ORTEC

ORTEC D Series

Totally depleted silicon surface-barrier detectors for time-of-flight

Planar, totally depleted silicon surface-barrier detectors used mainly for time-of-flight measurements with heavy ions. Active areas from 10 to 450 mm² and depletion depths from 15 to 100 µm; standard detectors are cut off-axis from the parent crystal to minimise channelling. Other areas and depths on special order.



Detector type	Active area	Depletion depth
Planar, totally depleted silicon surface barrier [1]	**10, 50, 150, 300 or 450 mm² (10 mm² only at 15 µm depth); larger areas on special order** [1]	**Nominal 15, 25, 40, 50, 75 or 100 µm (ranges 7–15, 15.1–25, 25.1–40, 40.1–65, 65.1–85 and 85.1–110 µm)** [1]

Specifications

DETECTOR

Detector type	Planar, totally depleted silicon surface barrier	[1]
Active area	10, 50, 150, 300 or 450 mm² (10 mm² only at 15 µm depth); larger areas on special order	[1]
Depletion depth	Nominal 15, 25, 40, 50, 75 or 100 µm (ranges 7–15, 15.1–25, 25.1–40, 40.1–65, 65.1–85 and 85.1–110 µm)	[1]
Alpha Suite compatibility	Not guaranteed compatible; requires an approved special for compatibility and warranted specifications	[1]

PERFORMANCE

Noise width	The first three digits of the model number give the total system noise width, measured with standard ORTEC electronics and 0.5 µs shaping time constants, for the smallest thickness in each range	[1]

MECHANICAL

Mounts	A (ring mount without connectors, special request, 40–100 µm), E (demountable transmission mount, up to 40 µm), T (transmission mount with side Microdot connector, over 40 µm); supplied in E mount up to 40 µm and T mount over 40 µm unless specified	[1]

ORDERING & ACCESSORIES

Models	D-020-010-15, D-035-050-15, D-035-050-25, D-020-050-40, D-060-150-25, D-035-150-40, D-095-300-25, D-055-300-40, D-100-450-25, D-090-450-40, D-015-050-50, D-015-050-75, D-015-050-100, D-030-150-50, D-030-150-75, D-025-150-100, D-045-300-50, D-040-300-75, D-030-300-100, D-070-450-50, D-060-450-75, D-060-450-100	[1]

GENERAL

Main application	Time-of-flight measurements with heavy ions	[1]
Maximum thickness variation	±0.5 µm (10 and 50 mm²), ±1.0 µm (150 and 300 mm²), ±3.0 µm (450 mm²)	[1]

Sources

[1] **D Series Planar Totally Depleted Silicon Surface Barrier Radiation Detector**
ORTEC (AMETEK) · product-page · Page title; Main Application; Ordering Information · checked 2026-10-16
https://web.archive.org/web/20261016000000/https://www.ortec-online.com/products/radiation-detectors/silicon...

Every value is taken from the manufacturer's own document; the number after the value refers to the source list. Always check against the latest datasheet before ordering.

The data comes from the manufacturer's published documents. Manufacturers may change specifications; the current configuration and performance are confirmed in the quotation.