LUMETRICS®

Precision Measurement Solutions

Lumetrics Standard Probes

Nominal Working Distance, Acceptance Angle, **Spot Size**, and **Practical Depth of Focus** are important characteristics of the optical probes, often requested by customers. The table below is intended to assist a user in selecting the best probe for his/her application. See corresponding white papers for details of how these numbers were obtained.

Part Number	Probe name	PL, mm	WD, mm	AA, deg	FWE, µm	DOF, mm
13000-58	25mm HNA	128	20.7	17	10	2
13000-20	25mm	128	19.6	7	20	10
13000-10	50mm	128	48.8	4	40	40
13000-75	100mm	128	91.0	2	80	160
13000-72	150mm EMS	250	144.9	4	35	30
13000-97	12 mm LT	73	11.5	16	10	2
13000-98	45 mm LT	73	42.6	6	25	20

PL: Path Length specifies the internal configuration of OptiGauge interferometer. The PL of 250 mm indicates a special configuration of OptiGauge to obtain a larger nominal working distance.

WD: Nominal Working Distance is the distance between the tip of the probe and the focal plane. The measurement window is defined by the measurement range of the OptiGauge, centered on the focal plane. The sample must to be positioned within the measurement window in order for the OptiGauge to obtain measurements.

AA: Acceptance Angle defines the approximate tolerance of the measurement to angular misalignment of the probe. The value in the table is provided for a glass-air interface. This value is smaller for less reflective samples, e.g. plastic-plastic interface.

FWE: Focal Spot Size is the diameter of the measurement beam at the focal plane. It approximately defines the sample area measured by the probe. Thickness variations within this given region are therefore averaged.

DOF: Practical Depth of Focus defines the approximate range of distances between the sample and the optical probe, where the amount of light reflected by the sample and coupled back into the OptiGauge is sufficient for reliable measurement purposes. The values in the table are given for glass-air interfaces. The values for less reflective interfaces (e.g. plastic-plastic) will be smaller.