



IEC 62471/2006 (Edition 1) – IEC 62471-2 TR/2009 (Edition 1)
Sub grouping for measurement on LEDs for lighting purpose

TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING

Photobiological safety of lamps and lamp systems
Photobiological safety of lamps and lamp systems – Parts 2: guidance on
manufacturing requirements relating to non-laser optical radiation safety

R = Required by Lab

S = May be subcontracted

W = Witness testing

3PPS = Three Phase Power Supply required

UVVIS = Not required when testing of products with LEDs for lighting purposes (200 – 780 nm)

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
4.1	Luminance	Luminance meter or monochromator	R
4.3.1	Actinic UV exposure limit (irradiance ; 200-400nm)	Calibration lamp for spectral irradiance measurement 200-400nm with power supply	R



**IEC SYSTEM FOR CONFIRMITY
TESTING AND CERTIFICATION OF
ELECTRICAL EQUIPMENT**

COMMITTEE OF TESTING LABORATORIES

Clause	Measurement/testing	Testing / measuring equipment / material needed	Subcontracting
4.3.2	Near-UV exposure limit (irradiance; 315-400nm)	Detector for UV spectral irradiance measurement	R
		Input optic for spectral irradiance measurement with optical fiber	R
4.3.3 4.3.5 4.3.6	Blue light hazard exposure limit (radiance; 300-700nm) Thermal hazard exposure limit (radiance; 380, 1400nm) Thermal hazard exposure limit – weak visual stimulus (radiance; 780-1400nm)	Calibration lamp for spectral radiance measurement 300-3000nm with power supply	R - UVVIS
		Telescope for spectral radiance measurement with field of view (1.7mrad, 11mrad, 100mrad) and with optical fiber	R
		Input optic for spectral irradiance measurement with optical fiber with field of view 100 mrad – alternative method	R - UVVIS
		Detector for visible	R
		Detectors for infrared radiation (780-1400nm)	R - UVVIS
4.3.4	Blue light hazard exposure limit – small source (irradiance, 300-700nm)	Calibration lamp for spectral irradiance measurement 200-780 nm with power supply	R
		Calibration lamp for spectral irradiance measurement 200-3000 nm with power supply	R - UVVIS
		Detector for UV and detector for visible	R
		Input optic for spectral irradiance measurement with optical fiber	R
4.3.7	Infrared hazard exposure – eye (irradiance; 780-3000nm)	Calibration lamp for spectral irradiance measurement 200-3000nm with power supply	R - UVVIS
		Detector for IR (780-1400nm)	R - UVVIS
		Detector for IR (1400-3000nm)	S
		Input optic for spectral irradiance measurement with optical fiber	R



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4.3.8	Thermal hazard exposure limit – skin (irradiance; 380-3000nm)	Calibration lamp for spectral irradiance measurement 200-3000 nm with power supply	R - UVVIS
		Detector for UV, detector for visible	R
		Detector for IR (780-1400nm)	R - UVVIS
		Detector for IR (1400-3000nm)	S - UVVIS
		Input optic for spectral irradiance measurement with optical fiber	R - UVVIS
B.1.1	Spectral radiance and spectral irradiance of UV, visible, IR	Double monochromator for UV and visible; single monochromator for IR radiation	R
5.2.3	Alfa angle dimension	Sliding caliper	R
5.2.4	Time duration of pulse source	Photocell and oscilloscope	S
6	Illuminance	Luxmeter	R

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