

COMMON-USE SUPPLIES and EQUIPMENT

PS STANDARD No. ES 009:2014

UNSPSC Code: 39101605-FL-T04

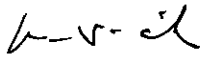
TECHNICAL SPECIFICATIONS


FLUORESCENT LAMP, 28 watts


Lamp type: T5, Triphosphor, Linear fluorescent lamp	
Nominal wattage : 28 Watts	
Color Temperature : 6500K (Daylight)	
Cap type : G5	
Test Requirement	Performance Specifications
Applicable Standards	<p>PNS IEC 60081: 2006 Amd.. 3: 2006 (IEC published 2002 Amd.. 3 : 2005) Double-capped fluorescents lamp – Performance specifications</p> <p>PNS IEC 61195: 2006 (IEC published 1999) Double-capped fluorescent lamps – Safety specifications</p> <p>PNS 2050-1-1:2007 Lamps and related equipment – Energy efficiency and labeling requirements – Part 1-1: Double-capped fluorescent lamps.</p>
General	<p>It may be expected that lamps which comply with the above standards will start and operate satisfactory at voltages between 92% - 106% of rated supply voltage and an ambient air temperature of between 10°C and 50°C when operated with a ballast complying with IEC 60921 or 60927, where relevant with a starter complying with IEC 60155 or IEC 60927, and in a luminaire complying with IEC 60598.</p>
Starting Characteristics	<p>A lamp shall start fully within the time specified on the relevant lamp data sheet and remain alight.</p>
Electrical Characteristics	<p>a. The initial reading of the voltage at the lamp terminals shall comply with the values specified on the relevant lamp data sheet.</p> <p>b. The initial reading of the power dissipated by a lamp shall not exceed the rated wattage, specified on the relevant lamp data sheet, by more than 5% + 0.5W</p>
Photometric Characteristics	<p>a. The initial reading of the luminous flux of the lamp shall be not less than 92% of the rated value.</p> <p>b. The initial reading of the chromaticity coordinates x and y of a lamp shall be within the 5 SDCM (standard deviation of color matching) from the rated values.</p> <p>c. The initial reading of the general color rendering index Ra of a lamp shall not be less than the rated value decreased by three.</p>

Lumen Maintenance	The lumen maintenance of a lamp shall not be less than 92% of the rated lumen maintenance value at any time in its life.
Operating Hours	Minimum of 20,000 burning hours
Efficacy	At input power of ≥ 14 to < 21 : 80 lm/W At input power of ≥ 22 to < 35 : 90 lm/W
Color Rendering Index	Shall not be less than 80
Operating Conditions	a. Maximum ambient temperature : 40 C b. Relative Humidity : 85%
	Other Requirements
Laboratory Facility	Must be accredited according to ISO/IEC 17025 or equivalent standard and qualified for pertinent lighting product tests by a recognized national or regional accreditation body.
Packaging	The following information shall also be provided at least at the lamp sleeve and/or literature: <ul style="list-style-type: none"> - Lamp diameter, e.g. (T5 or 1.58cm or 15.8mm in diameter - Lamp life in hours; - Lamp color temperature; - Lumen maintenance, %; - Rated average life in hours tested at 230V\pm 2%
Warranty	Supplier must provide a lamp warranty for a minimum of period of Two (2) years from the date that the goods are accepted by the Purchaser. During this period, the Purchaser may return defective fluorescent lamp to the Supplier for replacement.
Quality of Production	Fluorescent lamps must be manufactured under a Quality Assurance System in accordance with ISO 9001-2000 or equivalent.
Certification	Certification from internationally accredited testing laboratories will be accepted provided that the same laboratories are duly recognized under APLAC/ILAC.
Longevity of Test Results	Longevity of test results must be less than Two (2) years.
Packaging: Twenty-five (25) tubes per box	

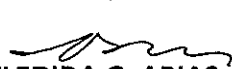
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