

JABATAN KERJA RAYA MALAYSIA



UNIT STANDARD, PENGUJIAN & MAKMAL (USPM)  
CAWANGAN KEJURUTERAAN ELEKTRIK

**TECHNICAL INFORMATION ON FLUORESCENT LUMINAIRES**  
**(DOWNLIGHT TYPE)**

		<i>For office use</i>
<b>A. <u>COMPANY</u></b>		
1. Name of Company	: .....	
2. Address	: .....	
	: .....	
	: .....	
3. Email Address	: .....	
4. Telephone No	: .....	
5. Faxes No	: .....	
6. ISO Certified Company?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>
If Yes, ISO Registration No	: .....	
Scope Of ISO Certification	: .....	
<b>B. <u>PRODUCT INFORMATION</u></b>		
1. Brand Name	: .....	<input type="checkbox"/>
2. Model	: .....	<input type="checkbox"/>
3. Manufacturer	: .....	<input type="checkbox"/>
4. Country of manufactured	: .....	<input type="checkbox"/>
5. Certification and Test report	: .....	
5.1 Standard No.	MS IEC 60598-1, MS IEC 60598-2- : .....	<input type="checkbox"/>
5.2 ST Registration No.	: .....	<input type="checkbox"/>
5.3 Validity Date of ST Registration	: .....	<input type="checkbox"/>
5.4 SIRIM Test Certificate No	: .....	<input type="checkbox"/>
5.5 Validity Date of SIRIM Test Certificate	: .....	<input type="checkbox"/>
5.6 SIRIM TypeTest Report No	: .....	<input type="checkbox"/>
5.7 Photometric Test Report No.	: .....	<input type="checkbox"/>

5.8 Type of Luminaires	: <input type="checkbox"/> Surface	<input type="checkbox"/> Electromagnetic Ballast	<i>For office use</i> <input type="checkbox"/>
	<input type="checkbox"/> Recessed	<input type="checkbox"/> Electronic Ballast	
	<input type="checkbox"/> Pendant		
5.9 Type of Lamp	: <input type="checkbox"/> 4 Pin Base (PL-C)		<input type="checkbox"/>
5.10 Wattage (Base)	: <input type="checkbox"/> 10W	<input type="checkbox"/> 18W	<input type="checkbox"/>
	<input type="checkbox"/> 13W	<input type="checkbox"/> 26W	

<b>C. PRODUCT SPECIFICATION / STANDARD</b>				<i>For office use</i>
<b>1. Construction of the Luminaires</b>				
<b>1.1 Remote Electrical Control Gear Box</b>				
1.1.1	Comprise of ballast and capacitor separated from the optical system.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>
1.1.2	The housing made from extruded aluminium or good quality mild steel sheet of minimum thickness of 0.8 mm. Please specify: Material : ..... Thickness : ..... mm	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>
1.1.3	The metalwork shall be rust inhibited to prevent corrosion and coated with electrostatic powder.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>
1.1.4	Electrical connection & disconnection from the incoming supply and optical system using plug & socket . (Else, please specify:.....)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>
1.1.5	Rubber or plastic grommets provided at cable entry. Please specify: Type of grommets :.....	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>
1.1.6	Terminal block marked 'L' and 'N' for incoming wires	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>
1.1.7	Internal wiring using Heat Resistance Type (HR 105°C) cable	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>
1.1.8	Internal wiring does not contact with heat producing components	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>
1.1.9	Terminal block 10A or bakelite type	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>
1.1.10	Earthing Terminal c/w Brass Bolt and nut and labelled	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>
1.1.11	The remote control gear shall be provided with steel rope to hang the control gear box	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>
1.1.12	The cables connecting the reflector and the control gear box shall have a maximum length of 300 mm. Please specify: length = .....	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>

1.2 Optical System					For office use	
1.2.1	Comprise of lamp, lampholder and reflector separated from the remote electrical control gear box.	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
1.2.2	Reflector shall be made of high purity anodized aluminium with at least 99.85% pure aluminium with low iridescent mirror finished (minimum thickness 1.0 mm) Please specify: Material: ..... Thickness: .....	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
1.2.3	Support and ring made from die-cast aluminium or mild steel (minimum thickness of 1.5 mm) Please specify: Material: ..... Thickness: .....	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
1.2.4	Support and ring shall be coated by electrostatic powder.	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
1.2.5	Clip made from stainless steel.	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
1.2.6	Light Output Ratio (LOR) for the luminaires shall be minimum 70% Please specify: LOR = .....%	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
<b>1.3 Marking of the luminaires</b>						
1.3.1	Legible and durable type	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
1.3.2	Provided with the relevant information:- - Mark of origin :..... - Rated Voltage :..... - Rated Wattage :..... - Type of Lamp :..... - No of lamps :..... - Power Factor (pf) :..... - Rated max ambient temp. (ta) :..... - IP Rated :.....	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
1.3.3	Marked not using pen	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
<b>1.4 Index of Protection</b>						
1.4.1	Standard No: MS IEC 60529	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
1.4.2	Minimum IP 2X Please specify : IP =.....	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
1.4.3	Warranty of corrosion at least 12 month from date of installation at site	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
<b>2. Components</b> <b>(All components shall be guaranteed for a minimum of 2000 hours life)</b>						
<b>2.1 Electromagnetic Ballast</b>						
2.1.1	Comply with Standard No. MS IEC 61347-1, MS IEC 61347-2-8, MS 141:PT. 2	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.1.2	Type approved by Suruhanjaya Tenaga and JKR	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.1.3	Polyester resin impregnated, silent operation type	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.1.4	Fitted with terminal block for easy wiring	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.1.5	Watt loss not more than 6W	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.1.6	Marked with luminaires manufacturer name: 'made for'	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.1.7	Guaranteed life = ..... hours	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

					<i>For office use</i>	
<b>2.2 Electronic Ballast</b>						
2.2.1	Comply with Standard No. MS IEC 60928, MS IEC 60929, MS IEC 61347-1, MS IEC 61347-2-3, BS EN 55015, MS IEC 61000-3-2	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.2.2	Type approved by Suruhanjaya Tenaga and JKR	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.2.3	Instant start, non-dimming, low in-rush starting current and low leakage type	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.2.4	Individual circuit for each tube	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.2.5	Watt loss not more than 3W	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.2.6	Total harmonic Distortion <25%	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.2.7	Third Harmonic Component ≤15%	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.2.8	Provided with overvoltage protection at 350 V and automatic shutdown in the event of lamp failure	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.2.9	Guaranteed life = ..... hours					<input type="checkbox"/>
<b>2.3 Capacitor</b>						
2.3.1	Comply with Standard No. MS IEC 61048 and MS IEC 61049	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.3.2	Type approved by Suruhanjaya Tenaga and JKR	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.3.3	Dry, self-healing metalised Polypropylene	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.3.4	Cylinder shape type	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.3.5	Casing made from aluminium or flame retardant plastic Please specify: .....	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.3.6	Marked with luminaires manufacturer name: 'made for'	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.3.7	Guaranteed life = ..... hours					<input type="checkbox"/>
<b>2.4 Lampholder</b>						
2.4.1	Comply with Standard No. MS IEC 60400	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.4.2	Type approved by Suruhanjaya Tenaga and JKR	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.4.3	<b>Dedicated</b> type lampholder					<input type="checkbox"/>
	1) 10W - G24q-1	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	
	2) 13W - G24q-1	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	
	3) 18W - G24q-2	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	
	4) 26W - G24q-2	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	
2.4.4	Made from non-metallic, heat resistant material	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
2.4.5	Incorporated with a housing made from extruded aluminium / good quality of mild sheet steel / aluminium die cast with mechanism to dissipate heat	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

2.4.6	Connection suitable for site entry PLC Lamp	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	For office use <input type="checkbox"/>
2.4.7	Guaranteed life = ..... hours					<input type="checkbox"/>
<b>3. Power Factor</b>						
3.1	Power factor corrected at least 0.95 lagging (for electronic ballast)	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
3.2	Power factor corrected at least 0.9 lagging (for electromagnetic ballast)	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

**D. TYPE, DIMENSION & WEIGHT (please attach technical specification & catalog)**

No.	Model No	Lamp type & no of lamp	Wattage (W)	Dimension (diameter x depth) (mm)	Weight (kg)
1					
2					
3					
4					
5					
6					

**E. LIST OF COMPONENTS (please attach relevant document)**

No.	Name Of Part	Manufacturer	Type of Material	Approval Lab & Standard No.	Test Report No./ Mill Cert. No.
1	Electrical Control Gear Box				
2	Reflector				
3	Support Ring				
4	Electromagnetic Ballast				
5	Electronic Ballast				
6	Capacitor				
7	Lamp Holder				
8	Terminal block				
9	Internal wiring				
10	Earthing Terminal				
11	Terminals Screws				
12	Steel Rope				
13	etc. Please List				
14					
15					

<b>F. Parts List (please list)</b>
..... . ..... . ..... . ..... .
<b>G. Method of Installation (please specify and attach relevant drawing/diagram)</b>
..... ..... ..... . ..... . ..... .
<b>H. Method of Maintenance (please specify and attach relevant drawing/diagram)</b>
..... . ..... . ..... . ..... .
<b>I. OTHERS (please specify and attach relevant document)</b>
1. .... 2. .... 3. .... 4. ....

I, .....hereby declare that the information given by me on behalf of the Company in this form and in any document attached is correct and true.

Date : .....

Designation : .....

Signature : .....

Company's Stamp

**FOR OFFICE USE**

Comment :

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USPM