



JABATAN KERJA RAYA MALAYSIA
CAWANGAN KEJURUTERAAN ELEKTRIK
UNIT PENSIJILAN BAHAN & STANDARD

TECHNICAL INFORMATION

KELUAR SIGN

A. COMPANY INFORMATION					
COMPANY NAME :					
ADDRESS :		TELEPHONE NO :			
		FAX NO :			
		COMPANY EMAIL :			
ISO CERTIFIED COMPANY		REGISTRATION NO:		SCOPE:	
1. ISO 9001	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
2. ISO 14001	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
3. ISO 50001	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO
4. ISO	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO

B. PRODUCT INFORMATION	
BRAND NAME :	
MODEL : 1. 4. 2. 5. 3. 6.	
STANDARD NO.: (MS IEC/IEC/etc.)	
CERTIFICATE OF APPROVAL NO. : (BOMBA)	DATE OF ISSUE:
	VALID UNTIL:
PRODUCT CERTIFICATION LICENSE NO.: (SIRIM/OTHER)	DATE OF ISSUE:
	VALID UNTIL:
TEST REPORT NO.:	TESTING LABORATORY:
	DATE OF ISSUE:
NAME OF MANUFACTURER:	COUNTRY OF MANUFACTURER:
FACTORY ADDRESS :	
CLASSIFICATIONS : Type (please tick): Box Type Slim Type <input type="checkbox"/> Single Sided <input type="checkbox"/> Surface <input type="checkbox"/> Single Sided <input type="checkbox"/> Double Sided <input type="checkbox"/> Recessed <input type="checkbox"/> Double Sided	TYPE: <input type="checkbox"/> T5 Fluorescent, 8W <input type="checkbox"/> LED

TECHNICAL INFORMATION

KELUAR SIGN

C. STANDARDS AND SPECIFICATIONS (Please tick \checkmark where applicable)					
					<i>For JKR use</i>
No.	Descriptions	Yes	No	Test Report No. & Page No.	Remarks
1.	<u>STANDARD COMPLIANCE</u>				
	1.1 'KELUAR' Sign - Specification (MS 983:2004)	<input type="checkbox"/>	<input type="checkbox"/>
	1.2 Particular Requirements – Luminaires for Emergency Lighting (MS 619-2-22:2005)	<input type="checkbox"/>	<input type="checkbox"/>
2.	<u>CASING</u>				
	2.1 Material of housing (metal of not less than 0.5mm thick)	<input type="checkbox"/>	<input type="checkbox"/>
	2.2 The body shall be made from good quality mild steel sheet, aluminium extrusions or or injection moulded flame retardant material. Material : (Please specify)	<input type="checkbox"/>	<input type="checkbox"/>
	2.3 Other material : (Please specify)
	2.4 The body shall be sprayed with an undercoat of zink chromate primer and finished with two coatings of super white baked enamel.	<input type="checkbox"/>	<input type="checkbox"/>
3.	<u>DIFFUSER (FLAME RETARDANT TYPE)</u>				
	3.1 Polycarbonate	<input type="checkbox"/>	<input type="checkbox"/>
	3.2 Prismatic Polyethylene Terephthalate Glycol (PETG)	<input type="checkbox"/>	<input type="checkbox"/>
	3.3 Other material : (Please Specify)
4.	<u>CONNECTOR</u>				
	4.1 Live, Neutral and Earth c/w label	<input type="checkbox"/>	<input type="checkbox"/>
5.	<u>CABLE / FUSES</u>				
	5.1 Heat resistance type (incoming & battery changing circuit)	<input type="checkbox"/>	<input type="checkbox"/>
	5.2 AC fuse c/w cover & DC fuse	<input type="checkbox"/>	<input type="checkbox"/>

TECHNICAL INFORMATION

KELUAR SIGN

C. STANDARDS AND SPECIFICATIONS (Please tick \checkmark where applicable)					
					<i>For JKR use</i>
No.	Descriptions	Yes	No	Test Report No. & Page No.	Remarks
6.	<u>BATTERY & CHARGING / DISCHARGING CIRCUIT</u>				
6.1	Maintenance free high temperature rated sealed Nickel Cadmium (NiCd)	<input type="checkbox"/>	<input type="checkbox"/>
6.2	Maintenance free high temperature rated sealed Nickel Metal Hydride (NiMH)	<input type="checkbox"/>	<input type="checkbox"/>
6.3	The battery shall be fully rechargeable to its Operational capacity in not more than 24 hours after discharge. Hours fully charged :	<input type="checkbox"/>	<input type="checkbox"/>
6.4	Availability of solid state automatic charger, change over device, indicator lamp, test switch and interior disconnecting device i.e. fuse, relay or other protective device.	<input type="checkbox"/>	<input type="checkbox"/>
6.5	Low volt cut-off safety features shall be Incorporated to prevent over discharge. Please specify :V	<input type="checkbox"/>	<input type="checkbox"/>
6.6	Response time less than 2 seconds upon failure. Response time :	<input type="checkbox"/>	<input type="checkbox"/>
6.7	The evidence of the 4 years design life for the cell battery shall be supplied by the battery manufacturer.	<input type="checkbox"/>	<input type="checkbox"/>
7.	<u>FLUORESCENT TUBE</u>				
7.1	Using 8W with minimum lumen output of 330 lumen. Lumen :	<input type="checkbox"/>	<input type="checkbox"/>
7.2	Minimum operation of 3 hours during emergency. Operation hours :	<input type="checkbox"/>	<input type="checkbox"/>
7.3	The lamp shall be minimum 2 fluorescent tube type.	<input type="checkbox"/>	<input type="checkbox"/>
7.4	Initial lamp lumen output (minimum 25% of normal lamp output) Initial lumen :	<input type="checkbox"/>	<input type="checkbox"/>
7.5	Lamp lumen output after 3 hour operation (minimum 10% of normal lamp output) Lumen :	<input type="checkbox"/>	<input type="checkbox"/>

TECHNICAL INFORMATION

KELUAR SIGN

Item	Reference	To be filled by Applicant			For JKR use
			Data / Test Report No.	Page	
8 LED Optical System					
8.1 GENERAL					
8.1.1 Type of LED		<input type="checkbox"/> SMD LED <input type="checkbox"/> Hi Power LED <input type="checkbox"/> Other : _____			<input type="checkbox"/>
8.1.2 The LEDs/LED module lumen output shall not be depreciated to 70% of the original output during the liability/warranty/ contract period.		<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/>
8.1.3 No flickering of light source in mode of operation and when it reaches end of life.		<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/>
8.1.4 LED/LED Module shall not be driven more than the rated drive current		<input type="checkbox"/> Yes <input type="checkbox"/> No LED rated drive current : mA			<input type="checkbox"/>
8.1.5 Number of LEDs/LED Modules	 numbers			<input type="checkbox"/>
8.2 Light Source					
8.2.1 LED are made of		<input type="checkbox"/> AlInGaP <input type="checkbox"/> InGaN <input type="checkbox"/> Other : _____			<input type="checkbox"/>
8.2.2 LED Brand		: _____			<input type="checkbox"/>
8.2.3 Model		: _____			<input type="checkbox"/>
8.2.4 Power of LED	LM-80	: _____ W			<input type="checkbox"/>
8.2.5 Maximum LED Drive Current	LM-80	: _____ A			<input type="checkbox"/>
8.2.6 Forward Voltage	LM-80	: _____ V			<input type="checkbox"/>
8.2.7 Lumen Output@ rated drive current If	LM-80	: _____ lm			<input type="checkbox"/>
8.2.8 LED Efficacy (lm/W)	LM-80	: _____ lm/W			<input type="checkbox"/>
8.2.9 Correlated Colour Temperature (CCT) of LED /LED module	LM-80	: _____ K			<input type="checkbox"/>
8.2.10 Color Rendering Index	LM-80	: _____			<input type="checkbox"/>
8.2.11 LED lumen Maintenance (L70, @25 °C)	LM-80	: _____ hrs			<input type="checkbox"/>
8.2.12 Junction temperature, Tj	LM-80	: _____ ° C.			<input type="checkbox"/>
8.2.13 LED Risk Group ,RG0(Exempt) classification as per IEC 62471 .	IEC 62471	<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/>
8.2.14 Photometric data provided	LM 79-08 & TM 21-11	<input type="checkbox"/> Polar curve <input type="checkbox"/> utilization Factor <input type="checkbox"/> Luminance distribution table <input type="checkbox"/> Light Ouput Ratio <input type="checkbox"/> Spacing to mounting Height Ratio			<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
8.3 Thermal Management Unit					
8.3.1 Type of material used		<input type="checkbox"/> Aluminium <input type="checkbox"/> Copper <input type="checkbox"/> Carbon <input type="checkbox"/> Other : _____			<input type="checkbox"/>
8.3.2 Thermal resistance		Please specify : _____ °C/W			<input type="checkbox"/>

TECHNICAL INFORMATION

KELUAR SIGN

C. STANDARDS AND SPECIFICATIONS (Please tick \checkmark where applicable)

For JKR use

No.	Descriptions	Yes	No	Test Report No. & Page No.	Remarks
9.	<u>SIGNAGE “ KELUAR SIGN “</u>				
9.1	“KELUAR” signage or legend and/or pictogram as per standard MS 983.	<input type="checkbox"/>	<input type="checkbox"/>
9.2	The lettering, pictogram and/or directional arrow shall be white on green background.	<input type="checkbox"/>	<input type="checkbox"/>
10.	<u>MARKING</u>				
10.1	Keluar Sign shall be marked with the following information as per below :	<input type="checkbox"/>	<input type="checkbox"/>

MARKING

Model No.	i.	ii.	iii.	iv.
Rated Supply Voltage (V)				
Rated Wattage (P ≤5 W)				
Power Factor (pf ≥ 0.6)				
Ambient temperature (ta)				
Emergency Duration (Hours)				
Mode of Operation				
Ingress Protection (IP)				
Suitable for direct mounting on normally flammable surface (F marked)				

10.2 Battery shall be marked with the following information as per below :

BATTERY MARKING

Battery Type	
Rated Supply Voltage (V)	
Manufacturing Date	
Battery Life Span (Hours)	

TECHNICAL INFORMATION

KELUAR SIGN

D. LIST OF COMPONENT				
LIST OF COMPONENTS FOR KELUAR SIGN (TO FILL UP)				
No.	Part Name	Manufacturer	Type of Material	Mill Certificate No. (Please attach)
1	Body (Casing)			
2	Diffuser (Front Panel)			
3	LED Chip			
4	Battery			
5	Fluorescent Lamp			

E. OTHERS (Please tick \checkmark where applicable)			
	Yes	No	For JKR use
1. Manual / Documents <i>(Please specify and attach relevant documents)</i>			
i. Method of Installation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Method of Operation & Maintenance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Warranty Certificate			
3. Photos (hardcopy & softcopy) shall be attached	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Front and back view	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Side View	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Internal View	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Product Marking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TECHNICAL INFORMATION

KELUAR SIGN

F. PENGESAHAN

Adalah saya dengan ini mengesahkan segala keterangan yang diberikan/dikemukakan bagi produk di atas adalah benar. Jika saya didapati membuat pengakuan **PALSU**, maka tindakan seterusnya boleh diambil oleh pihak JKR ke atas diri saya.

Cop Syarikat :



Tandatangan :

Nama :

Jawatan :

Tarikh :

G. ULASAN (*Untuk Kegunaan Pejabat*)

.....
.....