BOE

BTS025
Product Introduction

Rev. 0

BOE MLED Technology Co., Ltd.

1. Product Introduction

1.1 Scope of Application

This product specification is applicable to outdoor P2.5 full-color modules

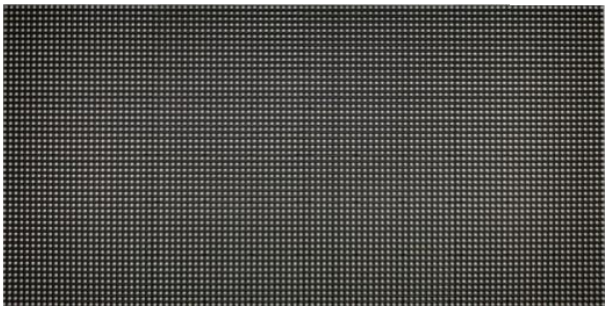
1.2 Product Description

This product uses SMD1415 lamp beads, each of which encapsulates a red chip, a green chip, and a blue chip. The 1415 lamp beads are welded to the PCB with the surface mount technology (SMT).

This product uses a constant current driver IC chip and an integrated line driver chip and is controlled by a computer.

Lamp beads and chips are mounted on the PCB board to form a unit board, which is then mounted on the bottom case to form a module

1.3 Product Picture

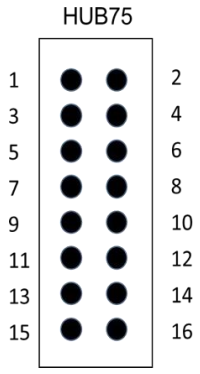
View	Illustration
Front view	
Back view	
Side view	

2. Product Specification

Category	Parameters	Specification
Module	Pitch(mm)	2.5
	LED Model	SMD1415
	LED Type	Gold/Copper wire
	Module resolution	128*64

Category	Parameters	Specification
	Module size ± tolerance(mm × mm × mm)	319.9 ± 0.1*159.9 ± 0.1*15.0 ± 0.2mm
	Module weight ± tolerance(g)	420 ± 10
	Module flatness (mm)	≤0.7
	Pixel density (dots/m^2)	160000
Optical Parameters	White balance brightness (cd/m^2)	≥5000
	Color temperature	9000-15000K
	Horizontal viewing angle	≥120°
	Vertical viewing angle	≥120°
	View distance (m)	≥2.5
Electrical Parameters	Maximum power consumption per module (W)	≤40
	Operating voltage (V)	5
	Signal input interface type	HUB75
Processing performance	Scanning mode	1/16
	Frame change frequency (Hz)	60
	Refresh frequency (Hz)	≥3840
	Driving mode	Constant drive
	Grayscale (Bit)	14
Operating Parameters	Continuous operation time	168hrs，Support uninterrupted display
	Average trouble-free working time	≥5000 hours
	Discrete runaway point	Preset at 0，＜30PPM
	Continuous runaway point	0
	Blind spot rate	Preset at 0，＜30PPM
Utilization Parameters	Typical life value (hrs)	100000
	Operating temperature (℃)	-10~60
	Storage temperature (℃)	-20~60
	Operating humidity (RH)	10%~60%
	Storage humidity (RH)	10%~60%
Protection grade	Protection grade	IP65(The protection level of the lamp surface when the back of the panel is under strict protection)
Certification	CCC	—
	Energy saving	—
	ROHS	—
	CE	—
	CB	—
	UL	—
	FCC	—

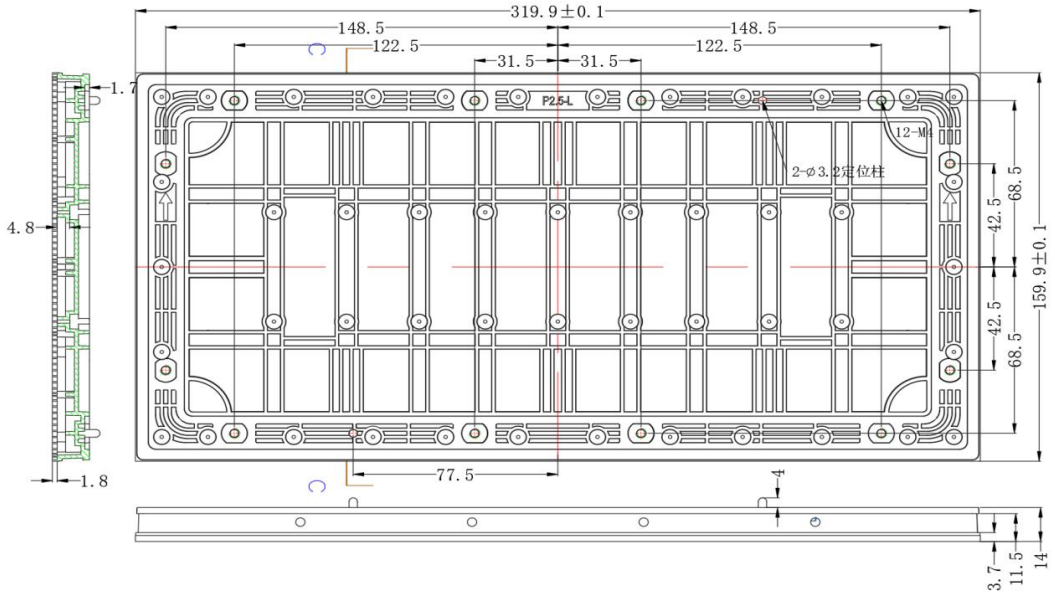
3. Definition of signal interface



Pin	Signal	Function	Pin	Signal	Function
1	R1	Red data signal	2	G1	Green data signal
3	B1	Blue data signal	4	GND	GND of power supply
5	R2	Red data signal	6	G2	Green data signal
7	B2	Blue data signal	8	N	Suspended
9	A	Line control signal	10	B	Line control signal
11	C	Line control signal	12	N	Suspended
13	CLK	Clock signal	14	LAT	Latch signal
15	OE	Enable signal	16	GND	GND of power supply

4. Mounting holes

4.1 Module mounting hole location（Unit：mm）



5. Reliability Test

Test Item	Test Condition	Test Result	Criteria
1. Thrust test	Lamp bead 1415≥1.3Kg.F	1.3Kg.F	Qualified
2. High and low temperature impact	-20℃ 30min 85℃ 30min；Cycle：10	Electricity OK	Qualified
3. High temperature	60℃，RH90%；all white； for 12H	Electricity OK	Qualified

Test Item	Test Condition	Test Result	Criteria
and high humidity test			
4. High temperature and high humidity storage	60℃，RH90%； for 48H	Electricity OK	Qualified
5. Waterproof test	Flush	Electricity OK	Qualified

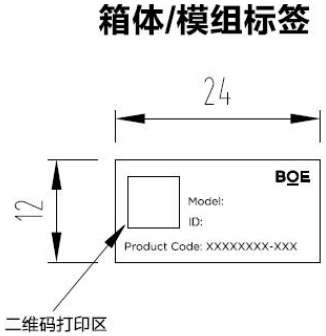
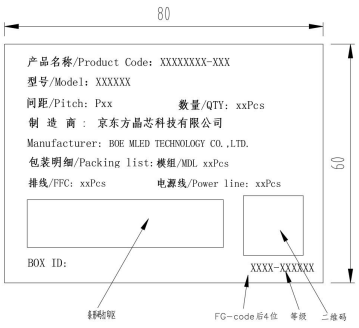
6. Shipment Specification

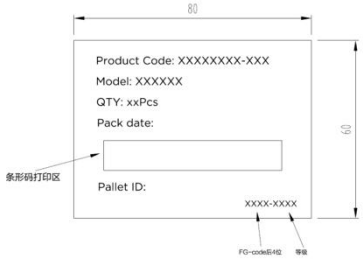
6.1 Packing Specification

Item	Schematic	Specific Requirements	Others
Module		1. Put the matching flat cardboard edge to edge between the two modules, and put the padded four corners of the modules into the matching corner protector. 2. Put 1 g of bagged drying agent into the module, avoid covering the label, and seal it with a heat-shrinking machine. 3 、 Place the matching wires and waterproof rings into the wire box. 4. After sealing, place foam in the carton to protect the module; place first layer of single PE foam card, put the accessories (40 waterproof rings, 20 5V power cords, 40 16-pin wires) with accessories box label side up; load the first layer of modules with the module leakage hole side down; place second layer of double PE foam cards, load second layer of modules, and cover it with single PE foam card (a carton contains 40 modules) 5、Seal the box with scotch tape, put it into the packing machine, and wrap it with a packing belt； 6、Use 100 * 120 cm cardboard, 6 boxes and single layer. Cartons can not exceed the edge of the cardboard, which the label should be shown, and should be no more than 3 layers (the	

Item	Schematic	Specific Requirements	Others
		entire tray can have no more than 18 boxes, 720 modules, 720 waterproof rings, 360 5V power cords and 720 16-pin wires). At least two layers of stretch film should be wrapped around the cartons after they are arranged properly	
Sealing method		Sealing method: Fully closed I-beam sealing (to prevent collapse)	

6.2 Labeling Information

Item	Schematic	Specific Requirements
MDL/Cabinet ID		(1) (2) (3) (4) (5) (6) (7) (8) TE S A 11 1 1980 00 0001 (1) Fixed two letters, provided by BOE on a separate sheet (2) Fixed capital S; (3) Fixed capital A; (4) Year(Last Two Bits of Year); (5) Month(1-9,XYZ); (6) Last four bits of FG Code; (7) Batch number (0-99) (8) Serial Number.
BOX ID		(1) (2) (3) (4) (5) (6) (7) (8) TE S A 11 1 0 00 003 (1) Fixed two letters, provided by BOE on a separate sheet; (2) Fixed letter S; (3) Fixed letter A; (4) Year(Last Two Bits of Year); (5) Month(1-9,XYZ); (6) Fixed value 0; (7) Batch number (0-99) (8) Serial Number.

Item	Schematic	Specific Requirements
PALLET ID	Pallet 标签 	(1) (2) (3) (4) (5) (6) (7) 2011 1 A M L 00 54 (1) Year; (2) Month(0-9,XYZ); (3) Fixed letter A (4) Fixed letter M; (5) Supplier Number (6) Batch number (0-99) (7) Serial Number.