Product Intro

Big Dipper

2024

Big Dipper Infinite/Infinite AI

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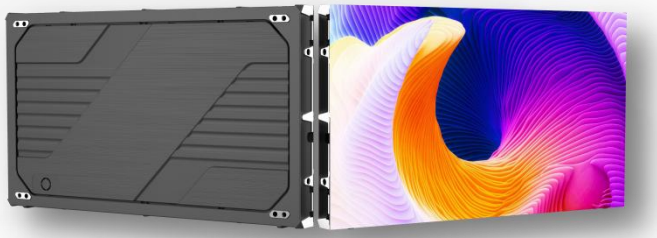


Big Dipper Micro Led TV

Specification

series	COB					
Pixel Pitch	P0.625	P0.78	P0.93	P1.25	P1.56	P1.87
COB Module	150*168.75mm					
COB Module Resolution	240*270	192*216	160*180	120*135	96*108	80*90
Cabinet Dimension	600*337.5*39.5mm		600*675*39.5mm		/600*337.5*39.5mm	
Cabinet Resolution	960*540	768*432	640*720/640*360	480*540/480*270	384*432/384*216	320*360/320*180
Grayscale	18-20bit+					
Brightness	600nit/1000nit (after calibration)					
Contrast Ratio	20,000:1					
Refresh Rate	3,840HZ					
Viewing Angle	170° (H/V)					
Power Input	AC100-240V(50/60Hz)					
Power Consumption(Max.)	≈130w/cabinet(600*675mm)/≈65w/cabinet(600*337.5mm)，≈325w/m² (600nit)					
Power Consumption(Ave.)	≈20w/cabinet(600*337.5mm)/≈40w/cabinet(600*675mm)，≈100w/m² (600nit)					
Certification	CCC/CE/Energy-saving/RoHS/ETL/UL/CB/EMC					

Display Performance

Wide Color Gamut

Big Dipper COB LED supports a wide color gamut, covering 98% of the DCI-P3 color space.

Advanced HDR Performance

Big Dipper COB LED features cutting-edge HDR technology, supporting up to 22-bit+ color depth for unparalleled image realism and depth

Big Dipper

Other

Big Dipper COB Advantages

High Protection Level - IP54 Rating
Ensures dust and splash resistance, suitable for various environments.

Panel Hardness - 4H
Offers excellent resistance to scratches and abrasions, maintaining clear visibility.

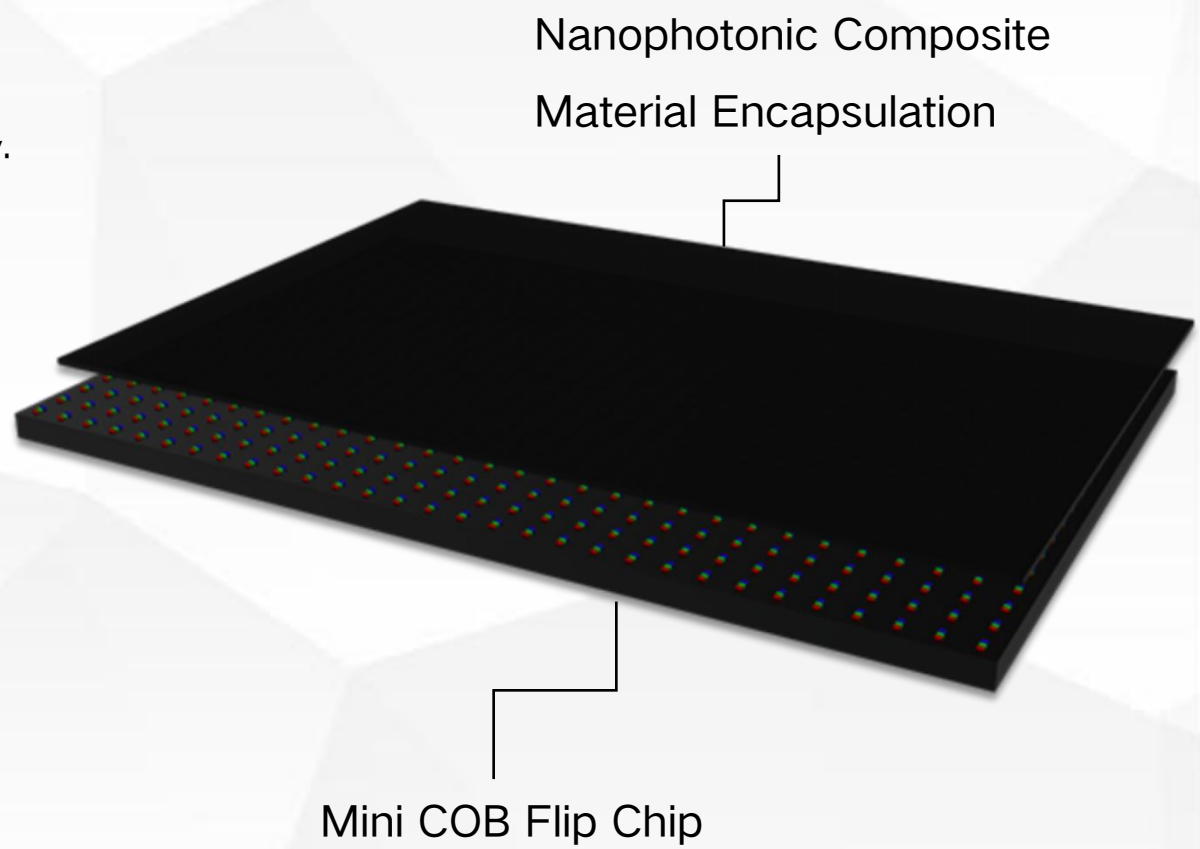
Water Washable Surface
Easy to clean without damaging the screen, ensuring hygiene and low maintenance.

Anti-Static Properties
prevents static electricity damage, enhancing longevity.

Oxidation Resistance
Prevents rust and corrosion

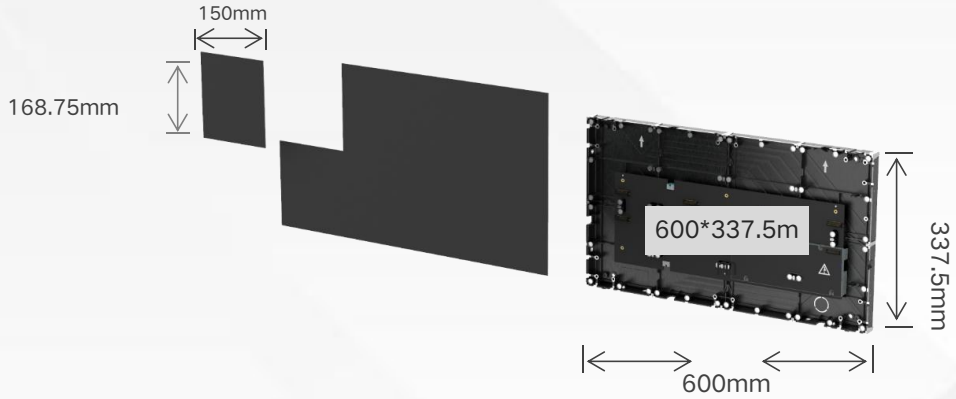
Anti-Glare Coating
Minimizes reflection and glare, providing better visibility under bright conditions.

Impact Resistant
Designed to withstand minor impacts, reducing the risk of damage from accidental bumps.



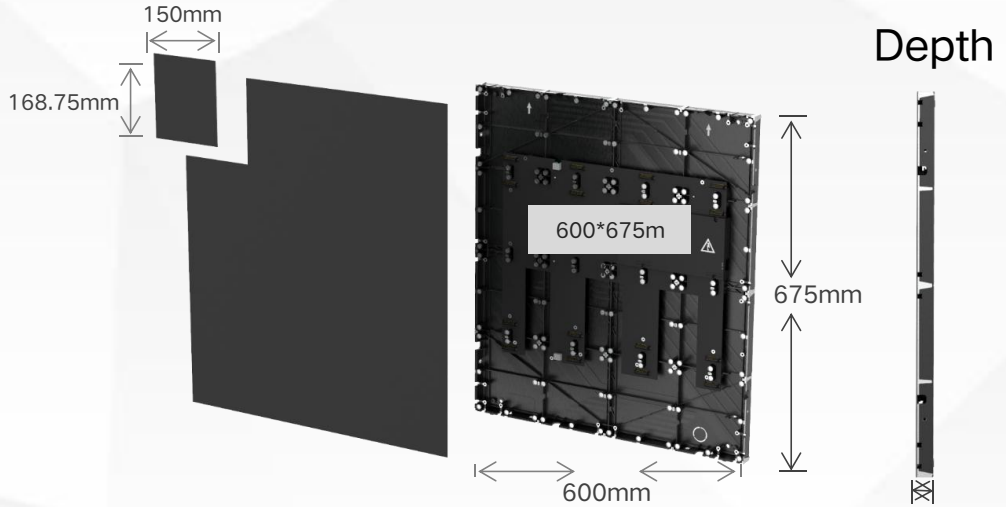
Big Dipper Infinite/Infinite AI Structure

Cabinet size 1



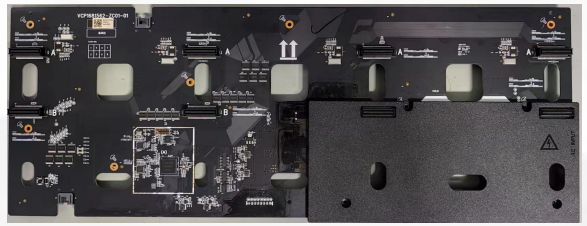
COB Module Cabinet

Cabinet size 2



COB Module Cabinet

3 in 1 Board



3 in 1 board

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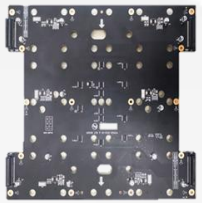
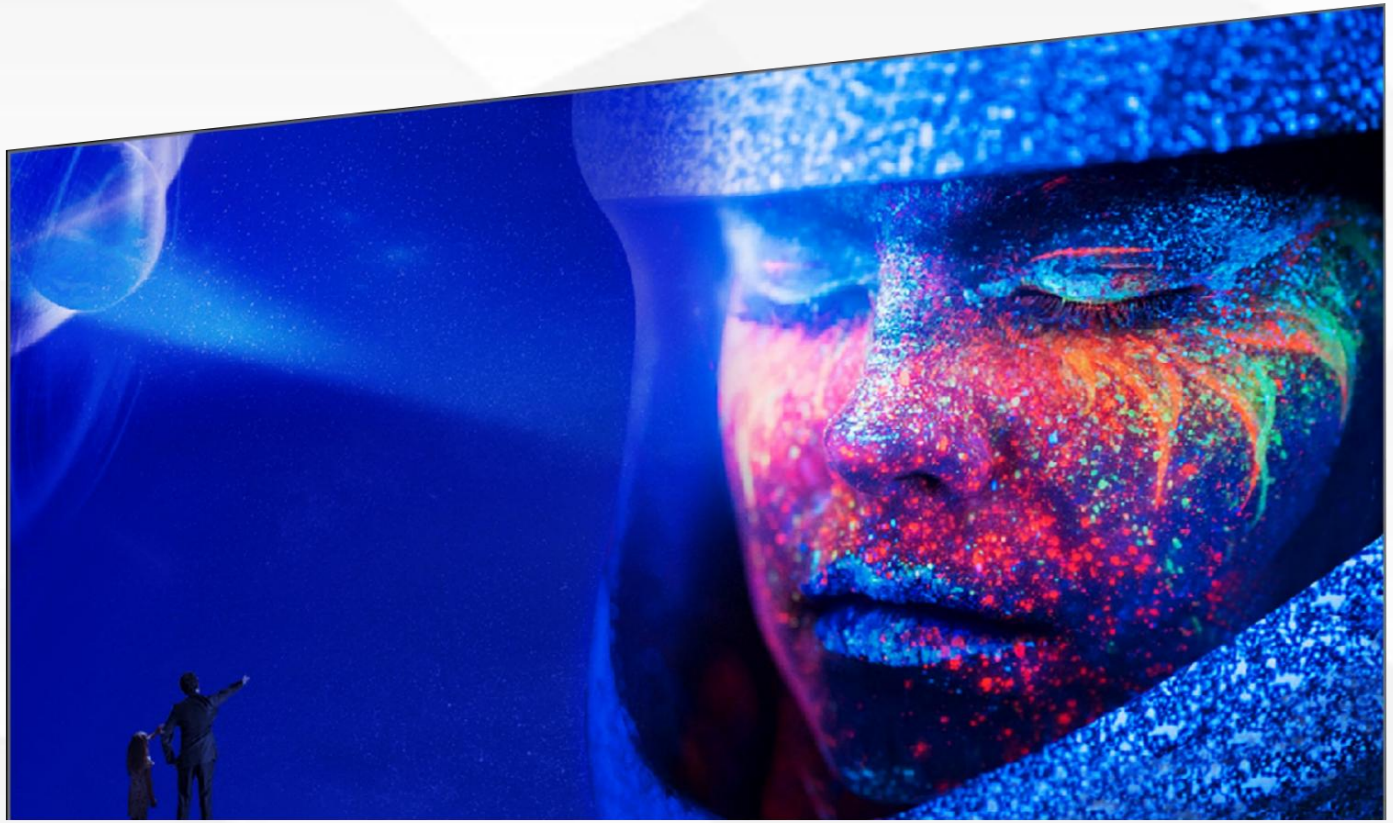


PSU Receiving Card Hub

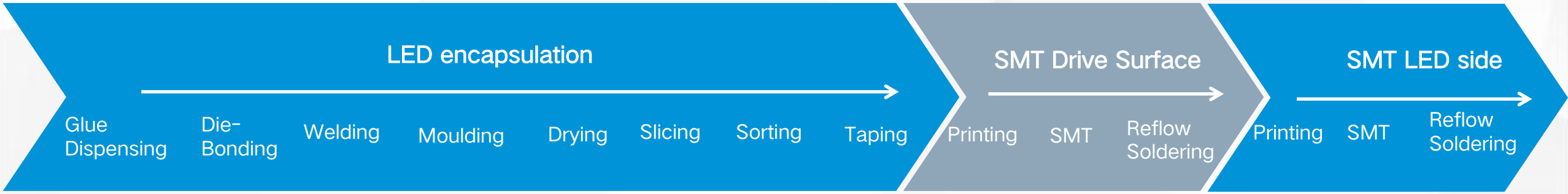
Big Dipper Micro Led TV series

- ✓ **Flip Chip COB** technology
- ✓ **Google & Roku**
- ✓ Plug & Play
- ✓ Seamless Alignment
- ✓ Contrast Ratio: 20,000 : 1
- ✓ HDR
- ✓ Built-in Hi-Fi Speaker

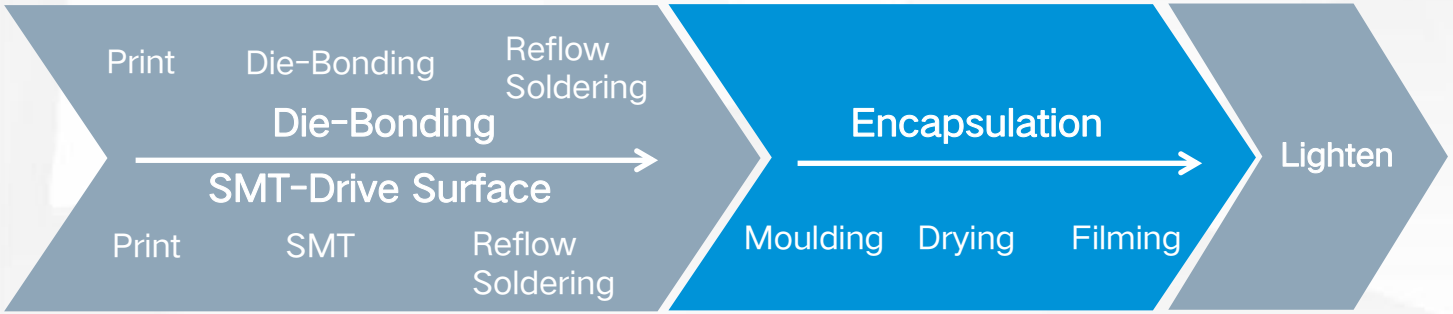


COB VS SMD
processing route --> Stability

SMD



COB



COB is higher stability
due to shorter processing route
without complicated encapsulation
process as SMD did.

COB VS SMD

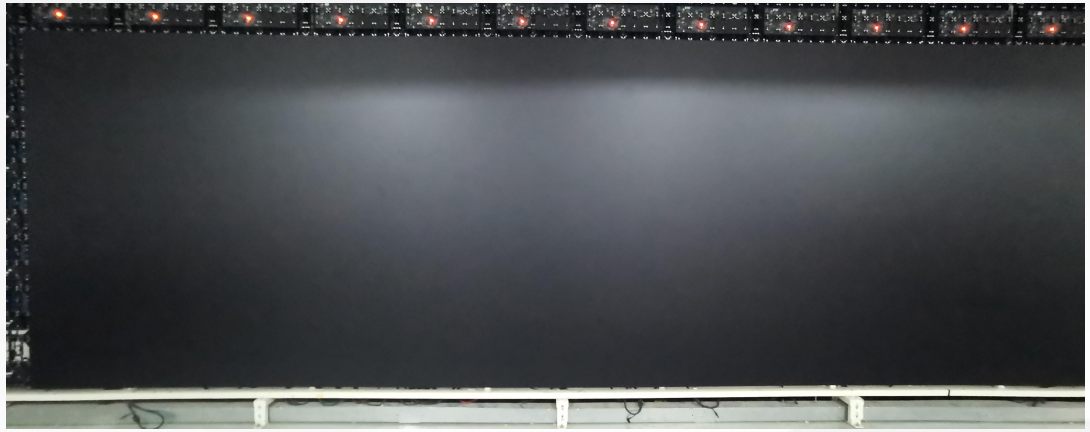
	Technical	SMD	COB
Reliability	LED Failure Rate	200PPM	5PPM
	Robustness	Fragile	⩾4H
	Moisture-Proof	No	IP54 front
	Low power Consumption (white balance)	⩾55℃,⩾5000w/sq.m	⩽45℃,⩽370w/sq.m
Display performance	Contrast Ratio	3,000:1	20,000:1
	Color Garmut	NTSC ⩽100%	DCI-P3 98%, NTSC⩾117%
	Grainy	Yes	No
	View angle	±140°	±160°
	Moire Pattern	Obviously	Reduced significantly

Big Dipper COB Advantages

Black Uniformity

No batches or Sorting concerns for every shipment

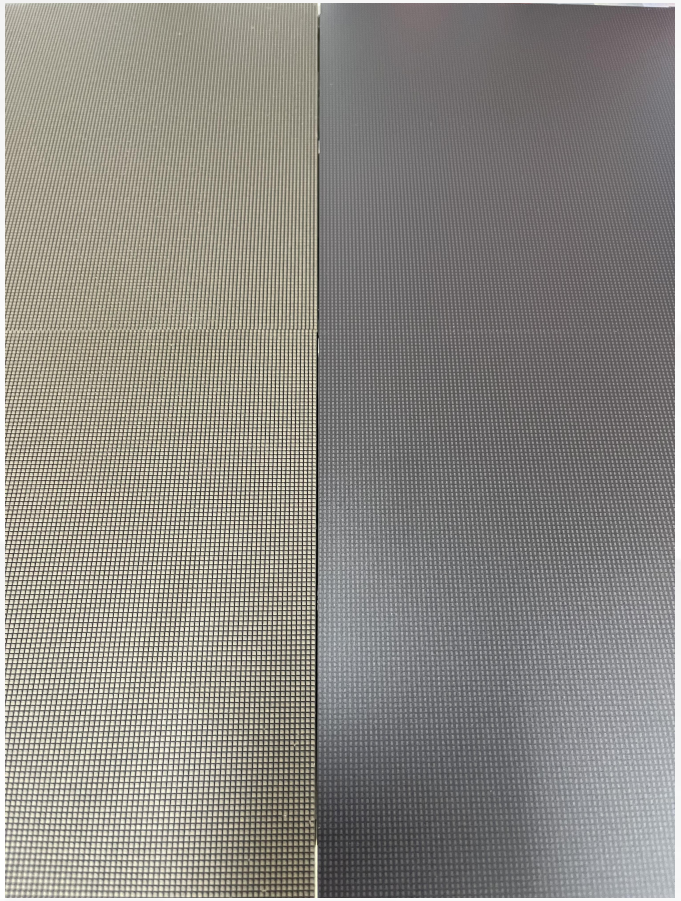
Front View



Side View

Close Up Comparison

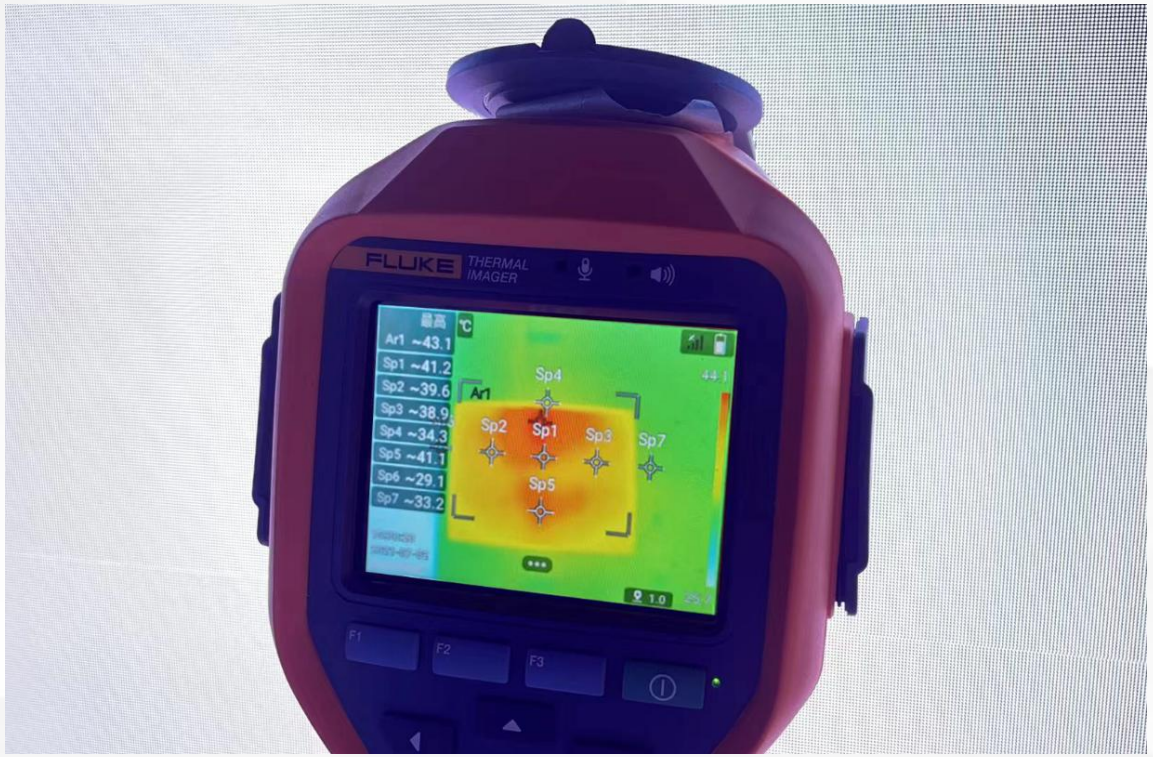
SMD 1.2 VS COB 1.2



Electrical Advantages

Advanced Heat Management

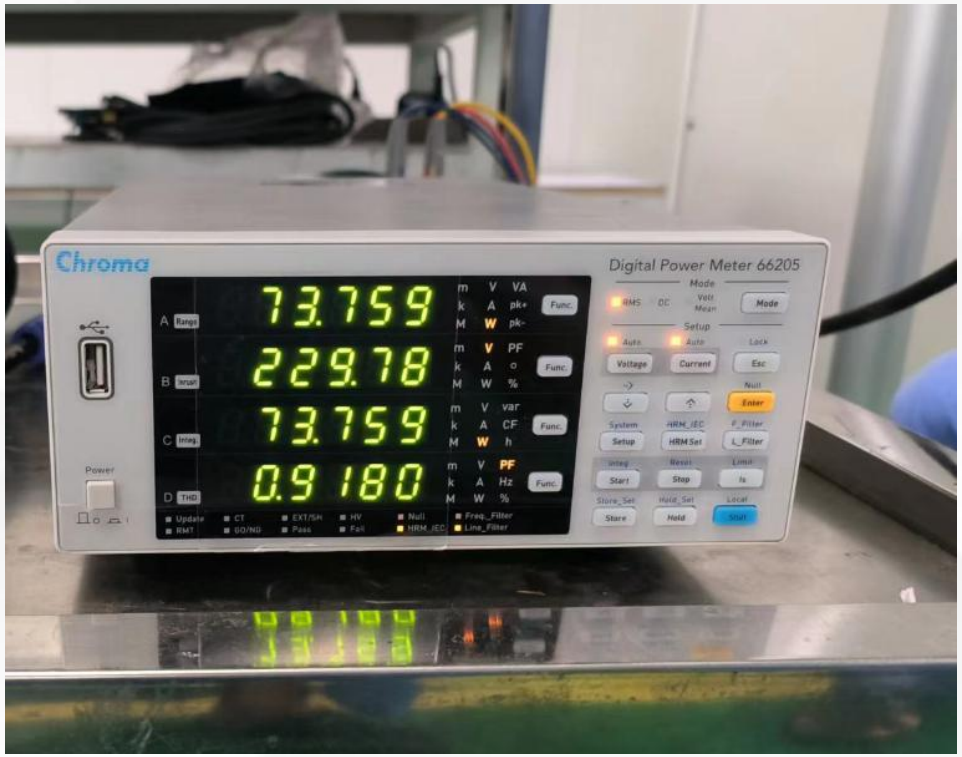
White balance Temp. ⩽45℃ at room temp.



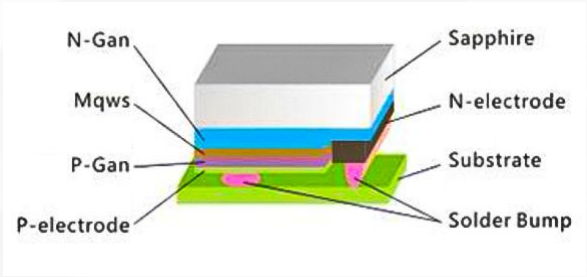
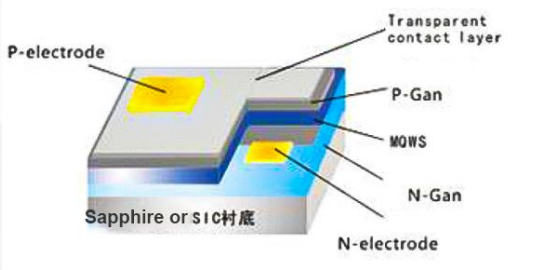
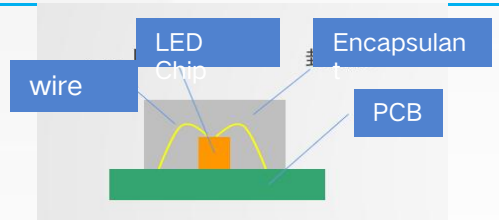
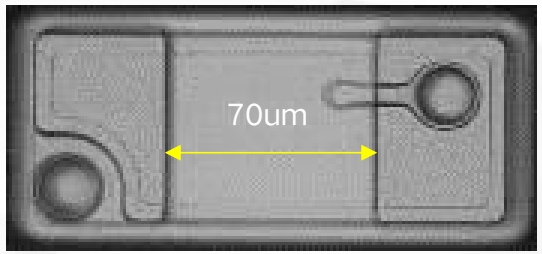
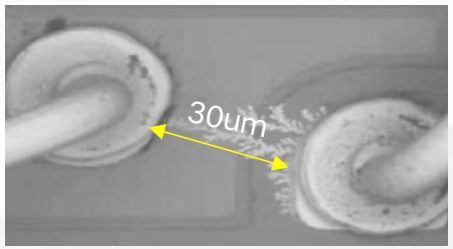
Energy Efficiency

⩽75w/cabinet

⩽370w/sq.m



Technical Advantages

	Flip-Chip	Formal
Chip section view		
COB section view		
Gerber		
Features	✓ Lower power consumption, lower surface temp. ✓ Sealed Chips, anti humidity ✓ The electrode has no migration leakage ✓ Higher Reliability due to wider GAP	• Poor Welding/wire break/current leakage • Higher thermal resistance • Vulnerable lamps • Frequent maintenance

Display Performance

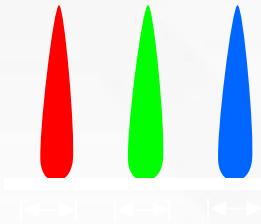
Long-term Color Consistency

Die-bonding with fixed Bin No., and fixed wavelength, calibration before shipment.

Die-bonding with fixed Bin No. → New Chip-mixing process → Dot to dot calibration

Mini COB

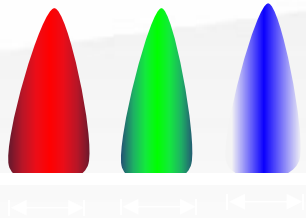
High Color Purity



R:625-630nm
G:533-535nm
B:465-467nm
DCI-BT2020

SMD

Low Color Purity



R:620-630nm
G:520-530nm
B:465-475nm