Introducing

LEDstudio

LED display technology for tomorrow's world

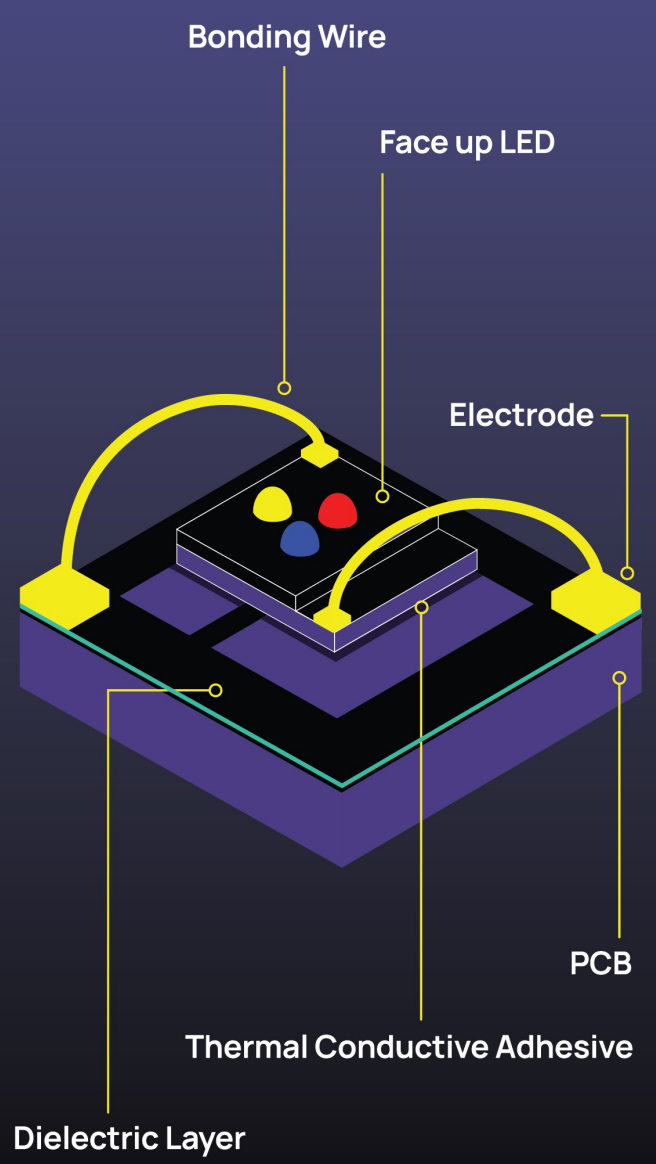
What pixel technology do I need & how bright should my screen be?

Global leaders in LED display technologies

Let's talk pixel technologies

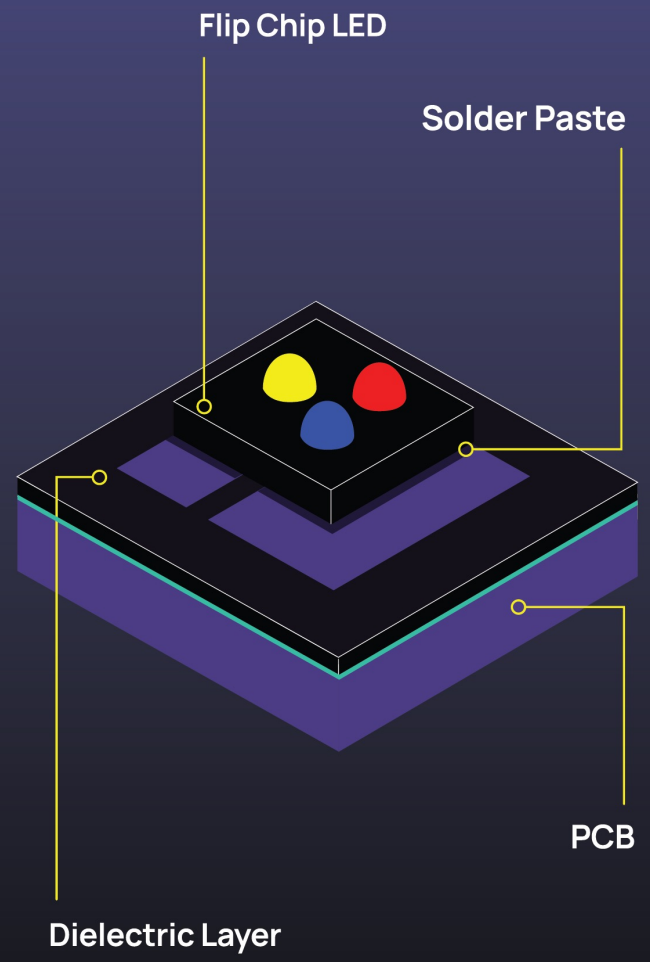
SMD | surface mount diode

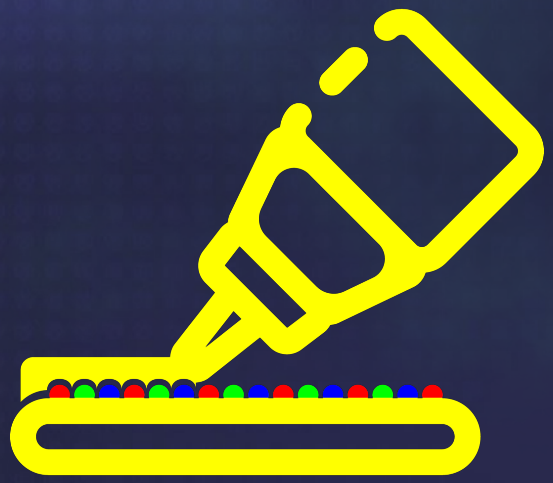
- ✓ Most common pixel technology on the market
- ✓ Offers wide range of pixel pitches
- ✓ Vibrant colors
- ✓ Cost effective
- ✗ Less energy efficient
- ✗ High heat output
- ✗ Less durable – if in raw form* (see GOB later in document)
- ✗ Reduced viewing angles in raw form*



Flip Chip

- ✓ Superior energy efficiency
- ✓ Runs cool
- ✓ Can be driven much brighter – more applications
  - Up to 200o nits for Flip Chip
  - Up to 4000 nits for Flip Chip (High-Bright)
- ✓ Vibrant colours
- ✓ Increased reliability due to due mounting method
- ✓ Higher ROI*
- ✓ Extra brightness – more use cases
- ✗ More expensive (initial purchase)





GOB – (Glue-on-board)

Glue-on-board I *Optional upgrade on SMD and Flip Chip products

Glue-on-board (GOB) is an innovative technology that seals the LED module surface with transparent epoxy glue:

- Improved durability – impact
- Improved pixel reliability – reduced dead pixels
- Easier to clean
- Splash proof
- Improved heat dissipation
- Improved efficiency
- Improved viewing angles

GOB is an essential consideration for displays in heavy footfall areas, especially when at ground level as the prevent accidental or intentional damage!

Average repair cost - £15- £18 per pixel – subject to inspection*

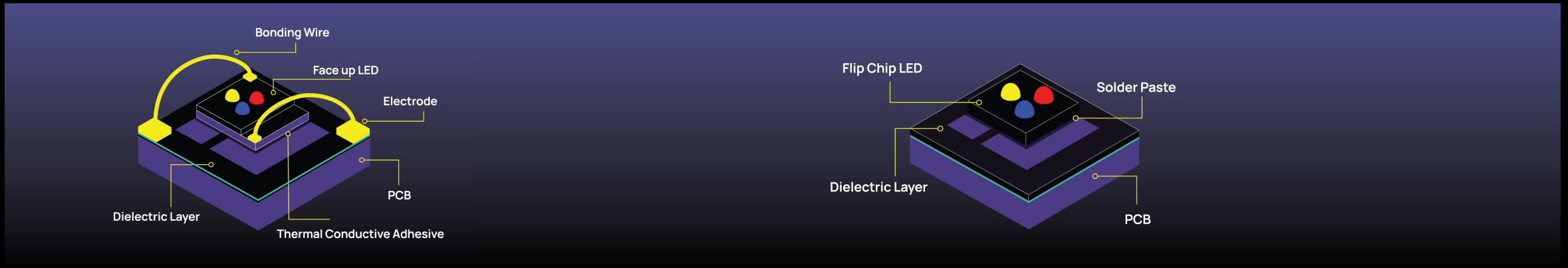
Brightness Guide

General NIT rules:

Indoor brightness- low to moderate ambient light
400-2000 nits is enough for most indoor use.

Indoor/outdoor brightness at close viewing – moderate to high ambient light
2000-3000 nits is usually enough for most situations.

Indoor / brightness or direct sun – high or direct ambient light
4,000 + nits should be enough in most situations.



SMD - Typically 600-1000 nits
Use cases: Spaces with moderate to low ambient light, not suitable for window displays etc.

Examples: Boardrooms, control rooms, reception areas set back from windows, retail interiors etc

Flip Chip – Up to 2000 nits
Use case: Spaces with moderate to high ambient light or spaces with changing light levels.

Examples: Atriums, receptions areas, retail interiors etc

Flip Chip (high-bright) – Up to 4000 nits
Use case: Spaces with moderate to high ambient light or direct sunlight exposure.

Examples: Shop windows, high bright atriums, direct sunlight spaces etc

LEDstudio | Maximising ROI

It is worth considering the space, the use case and the lighting conditions the display will be exposed to.

In some instances, it makes sense to over spec a display and run it at a lower NIT output, extending its lifespan and reducing ongoing running costs and giving you more flexibility...

Check out our education Blog for a deeper technology dive:

www.theledstudio.co.uk/blog/led-display-pixel-technologies-explained

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