



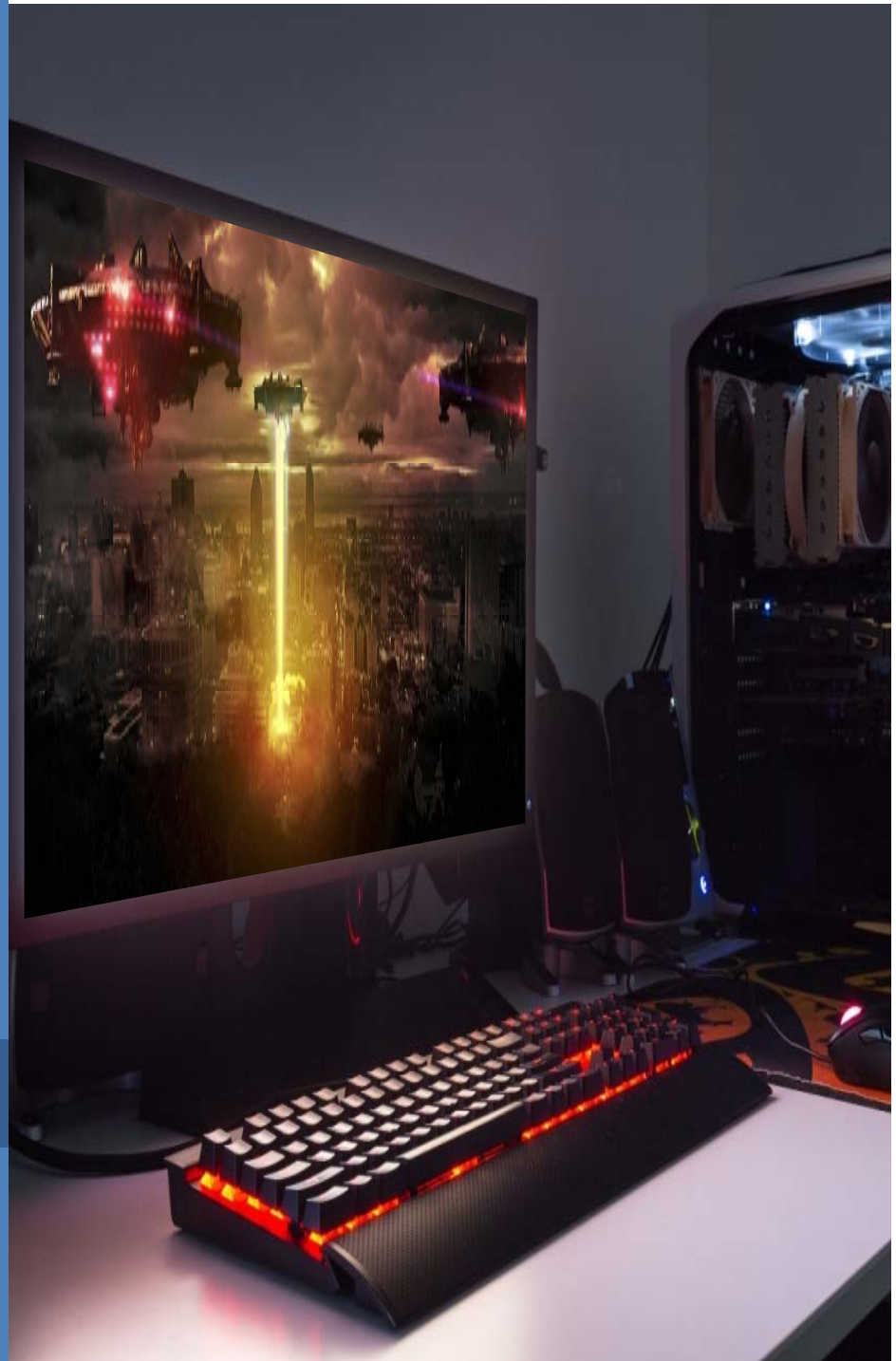
聚積科技法人說明會
2020/08/05

Celebrate Macroblock's 20th Anniversary

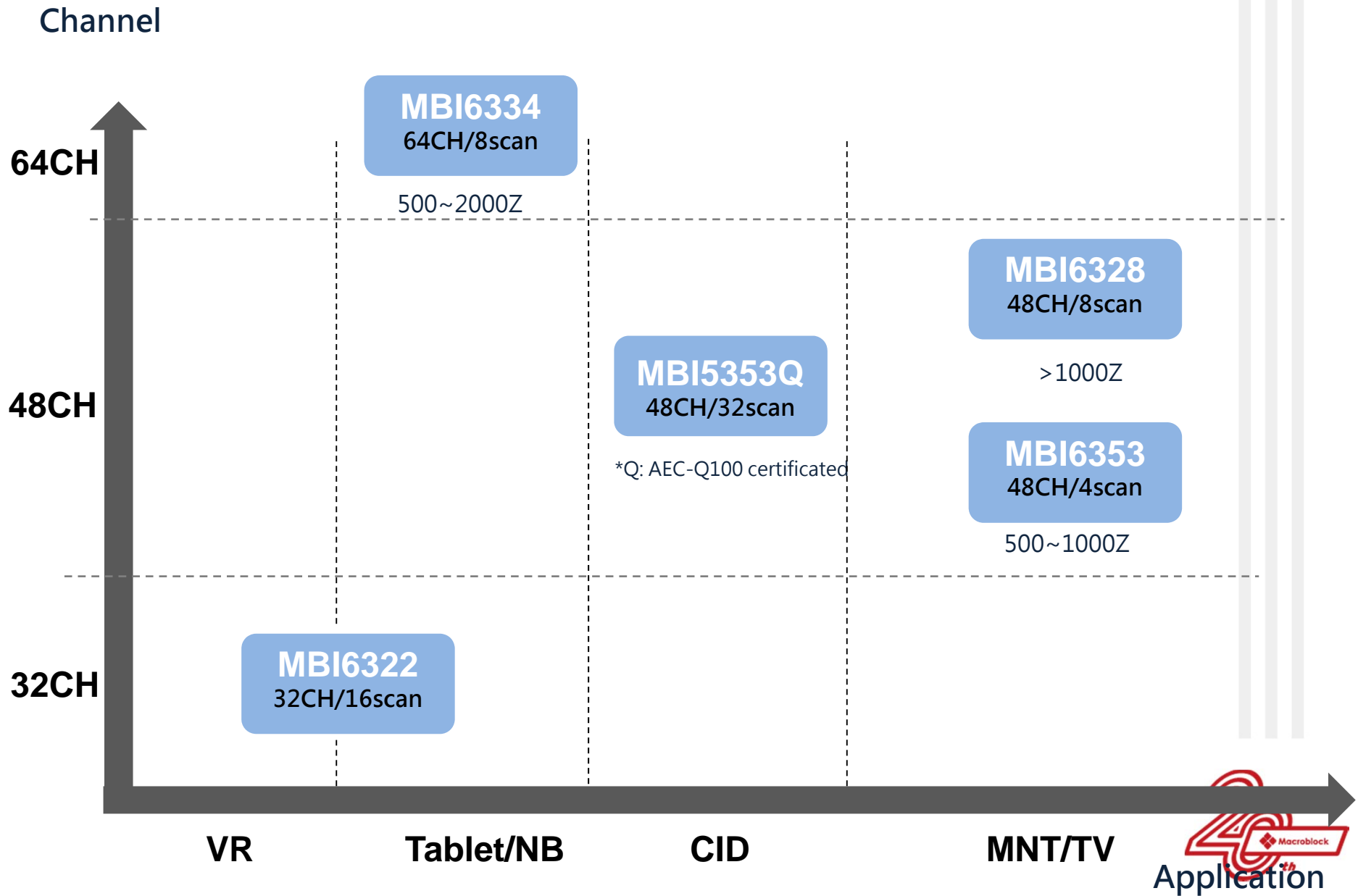


1

背光IC產品



MBI Local Dimming Solution Roadmap



Target Applications



Digital Signage Display

MBI6328
MBI6353



High-end TV

MBI6328
MBI6353



Gaming Monitor

MBI6328
MBI6353



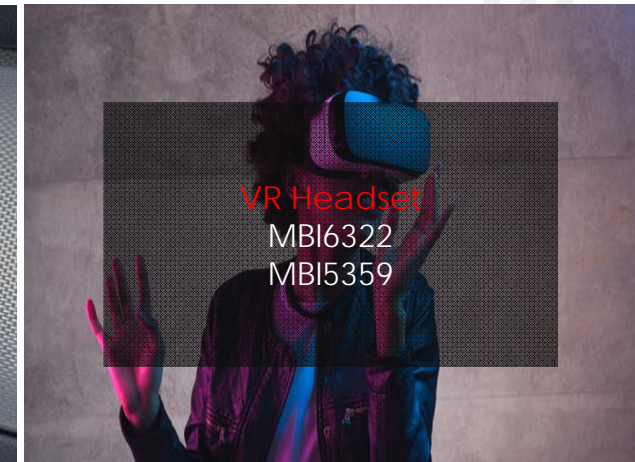
Gaming Laptop

MBI6322
MBI6334



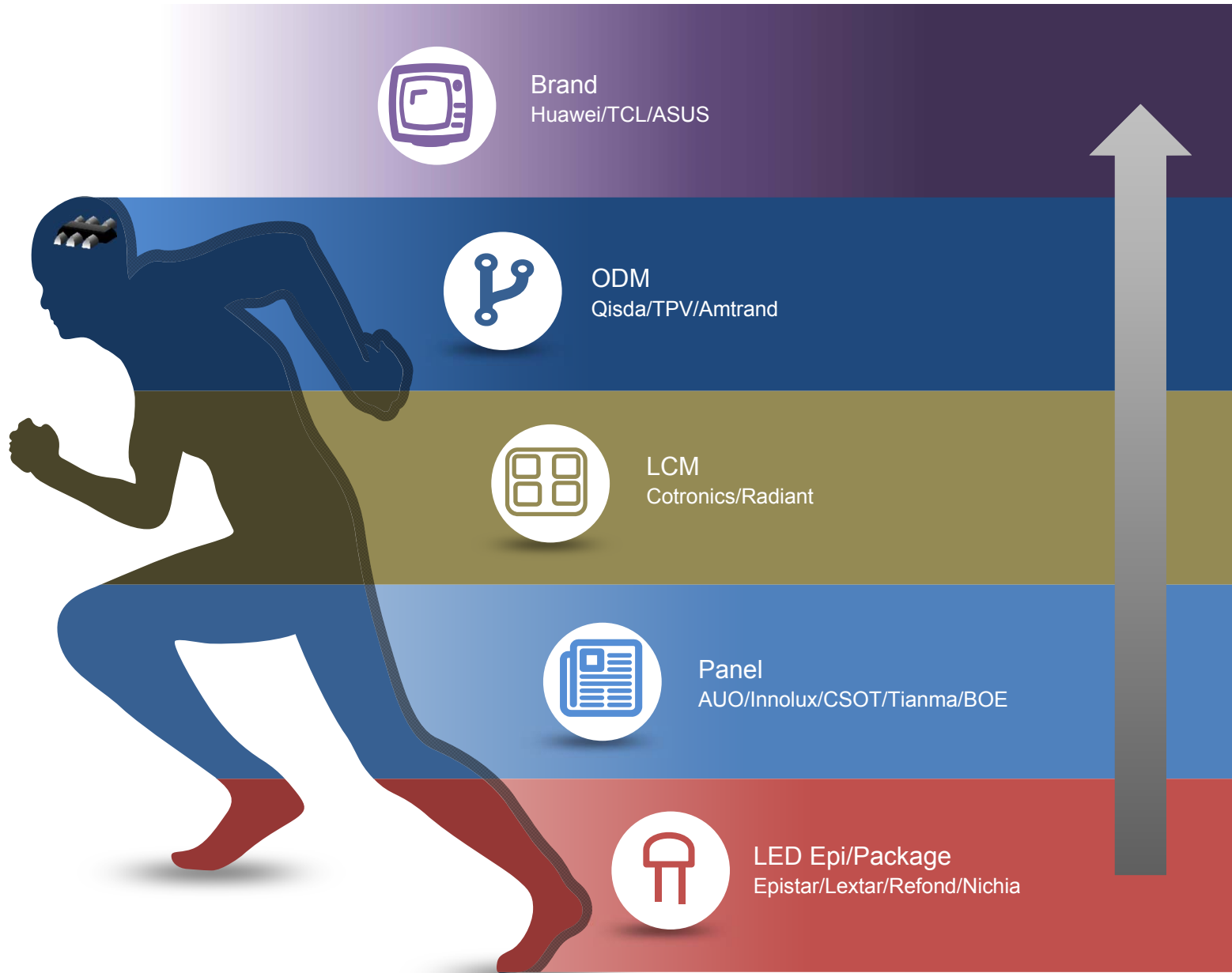
CID / Infotainment

MBI5353Q



VR Headset

MBI6322
MBI5359



Source:IEK

Mini LED 背光應用市場



13.3吋Tablet :
mini LED優勢: 高亮度、薄型化
(200-500 zones)

IC count
per device

1~5
pcs



15~17吋Laptop:
mini LED優勢: 高對比、薄型化
(240~960 zones)

IC count
per device

4~5
pcs



12~28吋車用儀表板:
mini LED優勢: 高亮度、高對比
(384~720 zones)

IC count
per device

3~10
pcs



27-43吋電競螢幕:
mini LED優勢: HDR顯示效果
(384~1152 zones)

IC count
per device

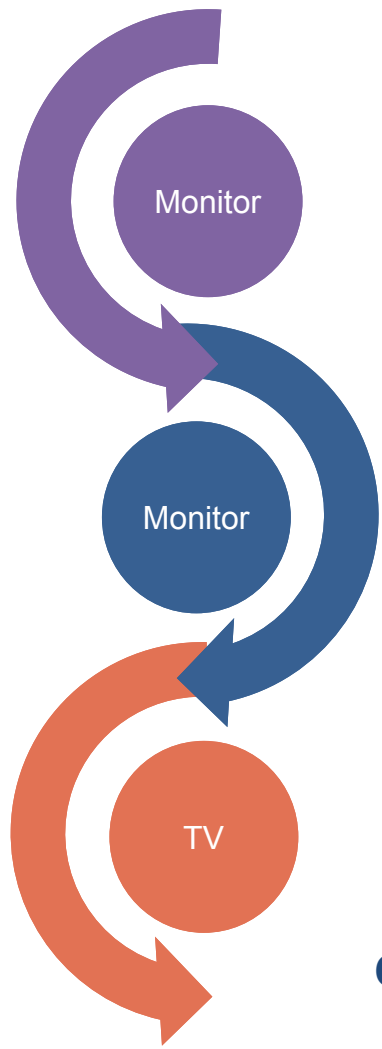
2~6
pcs



>75 吋高階電視:
mini LED優勢: 光源均勻、HDR
(1920~5184 zones)

IC count
per device

>16
pcs



Customer A

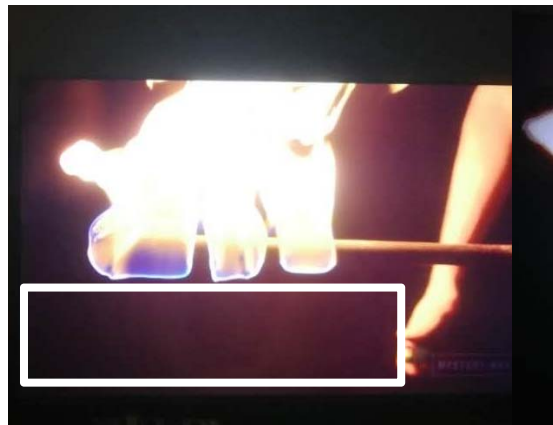
edge-lit



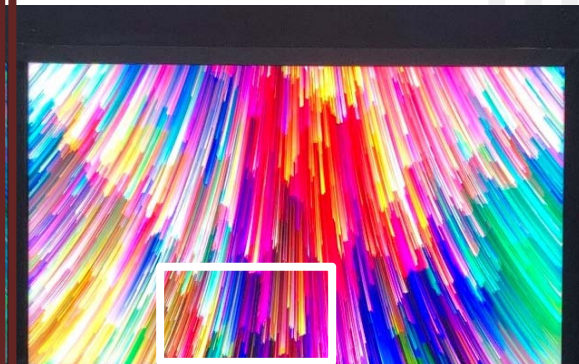
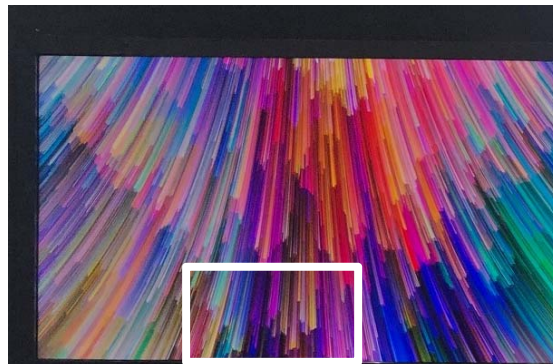
mini BL



Customer B



Customer C



2

Mini/Micro LED模組產品



Replacement Market : Conventional Display for Simulator



LCD system



Projector system

Product and its Hierarchy

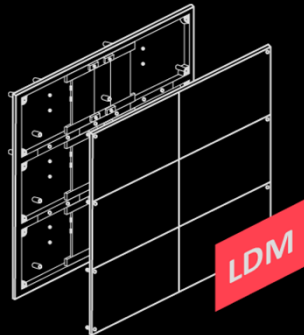
Full Color, LED Display Module (LDM)

Nominal Pitch

P1.25/P0.9375 /P0.75 mm
P0.625mm (2020 Q4.)

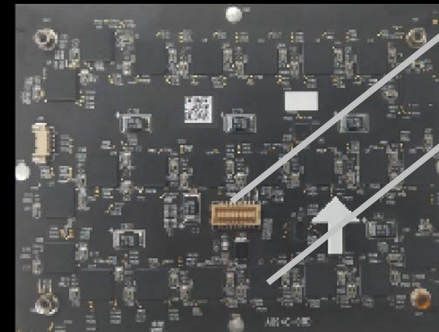
Resolution

1.25 mm Resolution 96*72 pixels per module
0.9375 mm Resolution 128*96 pixels per module
0.75 mm Resolution 160*120 pixels per module



Fabricated by COB
(Chip on Board) process
Flip chip size of 5 mil*9 mil

LED Side



Data Connector

MBI5359 highly integrated
driver IC

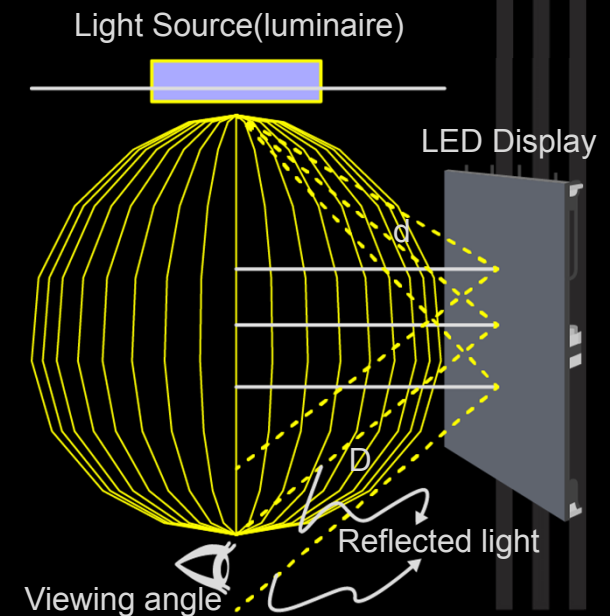
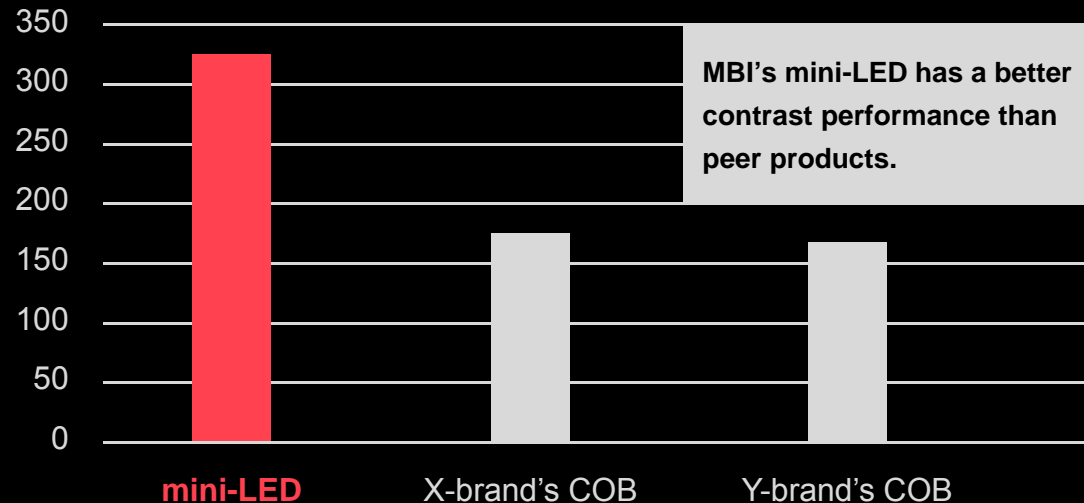
Driver Side

Superior Image Quality – Higher Contrast with Ambient light

ACR (Ambient Contrast Ratio)

The measurement of the luminance difference between the brightest white and deeper black a display is capable (~200lux)

Ambient Contrast Ratio Comparison



Product Selection Guide

Product Model	P1.25	P0.9375	P0.75	P0.625
PCBA Dimension(LxWxH in mm)	120x90	120x90	120x90	120x90
Resolution (Pixels)	96 x 72	128 x 96	160 x 120	192 x 144
LED/Chip Type	mini-LED	mini-LED	mini-LED	mini-LED
Brightness(before calibration)	1200 nits	1000 nits	800 nits	800 nits
Contrast (@16-bit grayscale)	≥ 25000:1	≥ 25000:1	≥ 25000:1	≥ 25000:1
Horizontal Viewing Angle (°)	≥ 170°	≥ 170°	≥ 170°	≥ 170°
Driver IC	MBI inside	MBI inside	MBI inside	MBI inside
Refresh Rate (Hz)	3,840	3,840	3,840	3,840
Grayscale @ regular brightness	>14 bits	>14 bits*	>14 bits*	>14 bits*
Color Space	>115% DCI-P3	>115% DCI-P3	>115% DCI-P3	>115% DCI-P3
White Balance	D6500	D6500	D6500	D6500
Operating Temperature	0-40 °C	0-40 °C	0-40 °C	0-40 °C

* Support HDR-optimized by request



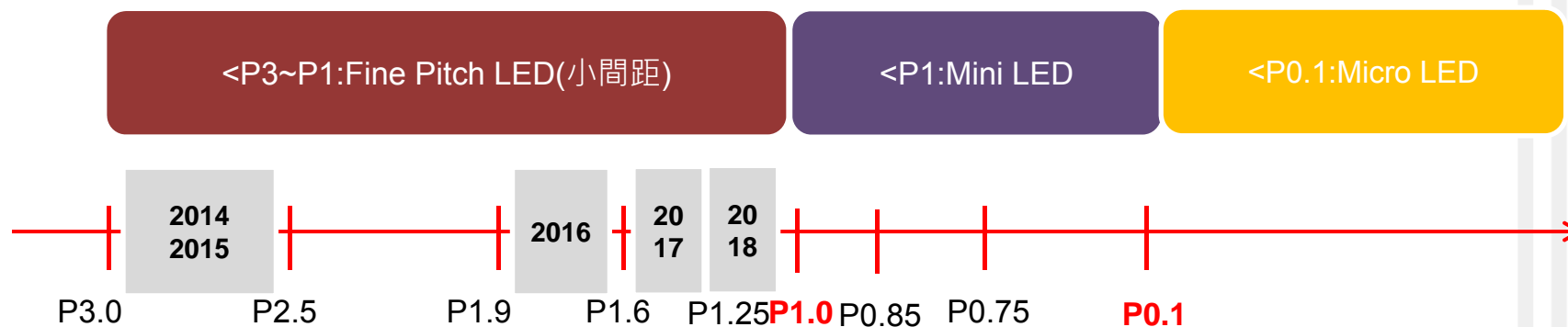


3

IC新產品開發



超小間距顯示屏對聚積的機會



既有市場
競爭激烈

- ◆ 顯屏128S-5268
- ◆ 5264、5263
- ◆ 5254、5754

- ◆ 背光IC:6322.6334.5353Q.6353.6328
- ◆ 顯屏IC:5353.5359.5759.5864
- ◆ 模塊:室內高端顯示屏(COB.巨量移轉)

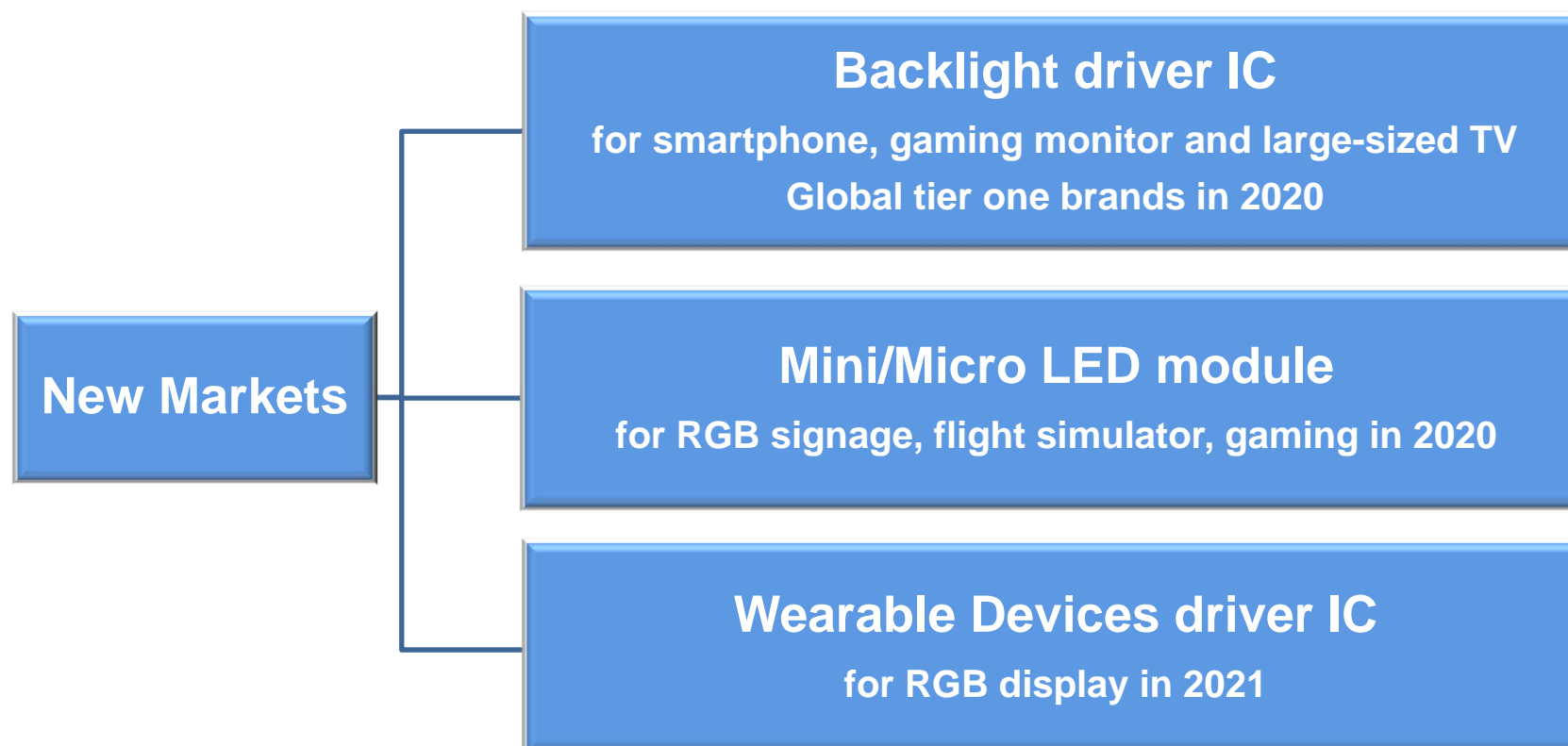
資料來源：公司彙整

附註說明：1.P3.0 表示為LED中心點至中心點的距離為 3.0mm



	Pitch	Optimal Viewing Distance
Display	P1.25mm	2.5m
	P0.75mm	1.5m
	P0.5mm	1.0m
Watch	P0.1mm(1*2)	0.2m
Glass	P0.01mm(10 μ m)	0.02m(2cm)

Focusing on New Addressable Markets



LED顯示屏6個「芯指標」

Image Quality

Retaining good image quality without 7 common image problems.

Minimum Gray

Enabling accurate gradient of the lowest brightness level.

HDR-Optimized

Reaching 16-bit grayscale performance at 4K Hz refresh rate at 32-scan design or above.

64 Scans

Pursuing higher scans for more flexibility on module design and production.

Low Power

Reducing surface temperature and power consumption at all times.

Highly-Integrated

Embedding driver IC and MOS in “one chip” for finer pitch LED displays.

Six
Elements



▶ Value proposition

High performance
driver IC

-16 bits color
depth
-64/128 scan
driver IC
-HDR

Integrated technologies

Mass transfer
& micro LED

Help customers
to win

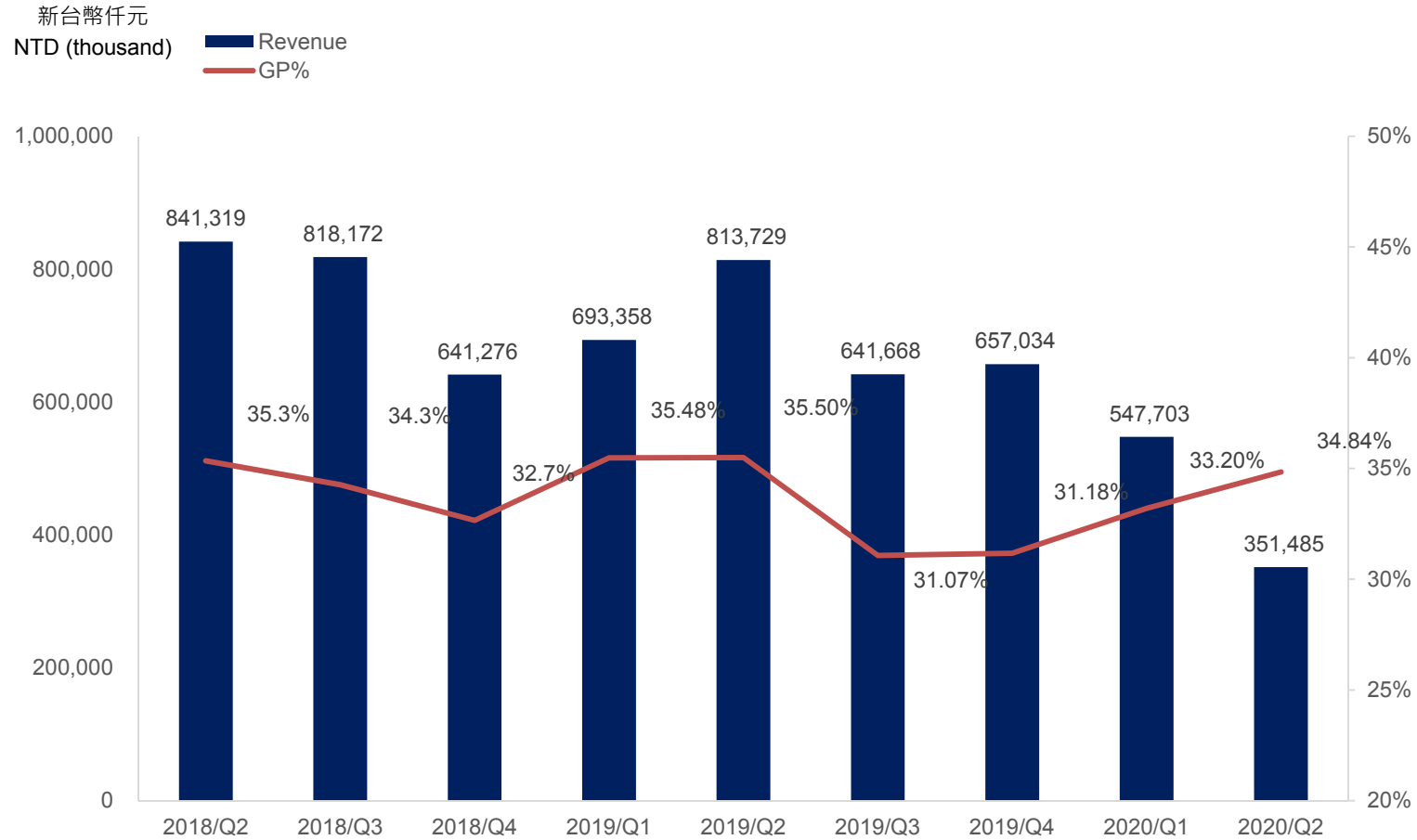
Customer
services
& perfect
storm

4

財務報告



合併營業收入與毛利率



合併損益表QoQ

新台幣仟元	2020Q2		2020Q1		QoQ (2020Q2 VS 2020Q1)
銷貨收入	351,485	100.0%	547,703	100.0%	-35.8%
毛利	122,465	34.8%	181,822	33.2%	-32.6%
營業費用	137,256	39.1%	162,361	29.6%	-15.5%
推銷費用	21,185	6.0%	23,536	4.3%	-10.0%
管理費用	21,574	6.1%	25,586	4.7%	-15.7%
研究發展費用	96,650	27.5%	110,657	20.2%	-12.7%
營業外收入及支出	16,958	4.8%	1,669	0.3%	916.1%
稅前淨利	2,167	0.6%	21,130	3.9%	-89.7%
淨利	13,315	3.8%	17,022	3.1%	-21.8%
-本公司業主淨利	13,337		17,070		
	<u>100%</u>		<u>100%</u>		
-非控制權益淨利	(22)		(48)		
	<u>0%</u>		<u>0%</u>		
稅後基本每股盈餘	0.33		0.42		



合併損益表YoY

新台幣仟元	2020Q2		2019Q2		YoY (2020Q2 VS 2019Q2)
銷貨收入	351,485	100.0%	813,729	100.0%	-56.8%
毛利	122,465	34.8%	288,837	35.5%	-57.6%
營業費用	137,256	39.1%	184,868	22.7%	-25.8%
推銷費用	21,185	6.0%	30,832	3.8%	-31.3%
管理費用	21,574	6.1%	33,989	4.2%	-36.5%
研究發展費用	96,650	27.5%	121,118	14.9%	-20.2%
營業外收入及支出	16,958	4.8%	4,005	0.5%	323.4%
稅前淨利	2,167	0.6%	107,974	13.3%	-98.0%
淨利	13,315	3.8%	97,241	12.0%	-86.3%
-本公司業主淨利	13,337		97,251		
	<u>100%</u>		<u>100%</u>		
-非控制權益淨利	(22)		(10)		
	<u>0%</u>		<u>0%</u>		
稅後基本每股盈餘	0.33		2.38		



合併損益表YoY(累計)

新台幣仟元	2020/1/1~6/30		2019/1/1~6/30		YoY (2020/1/1~6/30 VS 2019/1/1~6/30)
銷貨收入	899,188	100.0%	1,507,087	100.0%	-40.3%
毛利	304,287	33.8%	534,818	35.5%	-43.1%
營業費用	299,617	33.3%	362,590	24.1%	-17.4%
推銷費用	44,721	5.0%	62,953	4.2%	-29.0%
管理費用	47,160	5.2%	66,137	4.4%	-28.7%
研究發展費用	207,307	23.1%	234,777	15.6%	-11.7%
營業外收入及支出	18,627	2.1%	16,358	1.1%	13.9%
稅前淨利	23,297	2.6%	188,586	12.5%	-87.6%
淨利	30,337	3.4%	163,155	10.8%	-81.4%
-本公司業主淨利	30,407		163,177		
	<u>100%</u>		<u>100%</u>		
-非控制權益淨利	(70)		(22)		
	<u>0%</u>		<u>0%</u>		
稅後基本每股盈餘	0.74		4.00		





Thank You!

