

# Product Roadmap

## - Middle Size -

### 2013 Ver.13.1

January 10th, 2013  
NLT Technologies, Ltd.

- Mass Production
- Under Development
- Under Planning

# Products Roadmap for Industrial — 5.0” - 5.7” —

Jan. 10th, 2013

DIM-PP-0711

Ver.13.1



## CMOS

### TN+WV

#### Thin Type

**NL6448**  
**BC18-07** 300 cd/m<sup>2</sup>, 900:1, 50 %, -20 to +70°C  
127.2(H) x 100.4(V) x 5.8(D)mm

5.7”  
VGA

**NL6448**  
**BC18-01** CMOS 6bit, 262,144color, 400cd/m<sup>2</sup>, 850:1, 60%  
80°/ 80°, 80°/ 80° (U/D, R/L), -30 to +80°C, LED life time 50kHr

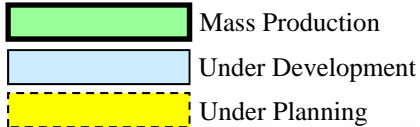
#### High Luminance

**NL6448**  
**BC18-01F** 800cd/m<sup>2</sup>

#### High Luminance

**NL6448**  
**BC18-06F** Portrait View  
-01F with different connector,  
number of connector pins and thickness

CY'13/1Q    CY'13/2Q    CY'13/3Q    CY'13/4Q    CY'14/1Q    CY'14/2Q    CY'14/2H    CY'15/1H



# Products Roadmap for Industrial

## — 6.5” —

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6.5”  
XGA

### LVDS TN+WW

**T-EVT** NL10276  
BC13-01C LVDS(6bit+FRC2bit) 16,777,216 / 262,144color, 650cd/m<sup>2</sup>, 500:1, 25ms, 36%  
80°/ 60°, 80°/ 80° (U/D, R/L), -20 to +70°C, Narrow Frame, COG

NL10276  
BC13-01 500cd/m<sup>2</sup>, Clear

6.5”  
VGA

### LVDS TN+WW

NL6448  
BC20-30/30D Long Life, -30 to +80°C  
Luminance : 600cd/m<sup>2</sup>  
-30: Clear -30D: AG

NL6448  
BC20-30F Long Life, -30 to +80°C  
Luminance : 1000cd/m<sup>2</sup>  
Clear

**T-EVT** NL6448  
BC20-30C Long Life, -30 to +80°C  
Luminance : 1000cd/m<sup>2</sup>  
AR+Clear

### CMOS TN+WW

NL6448  
BC20-18D → NL6448  
BC20-35/35D Long Life, -30 to +80°C  
Luminance : 600cd/m<sup>2</sup>  
-35: Clear -35D: AG  
400cd/m<sup>2</sup>, 600:1  
80°/ 60°, 80°/ 80° (U/D, R/L)  
-10 to +70°C

NL6448  
BC20-21C → NL6448  
BC20-35C Long Life, -30 to +80°C  
Luminance : 1000cd/m<sup>2</sup>  
AR+Clear  
**T-EVT** NL6448  
BC20-35F Long Life, -30 to +80°C  
Luminance : 1000cd/m<sup>2</sup>  
Clear

### CMOS

NL6448  
AC20-KK/KKD/KKF/KKC

LED life time 100kHr, -30 to +80°C  
 -KK: Clear -KKD: AG  
 -KKF: High Luminance, Clear  
 -KKC: T-EVT, High Luminance, AR+Clear  
**Built-in LED Driver Circuit**

CY'13/1Q    CY'13/2Q    CY'13/3Q    CY'13/4Q    CY'14/1Q    CY'14/2Q    CY'14/2H    CY'15/1H

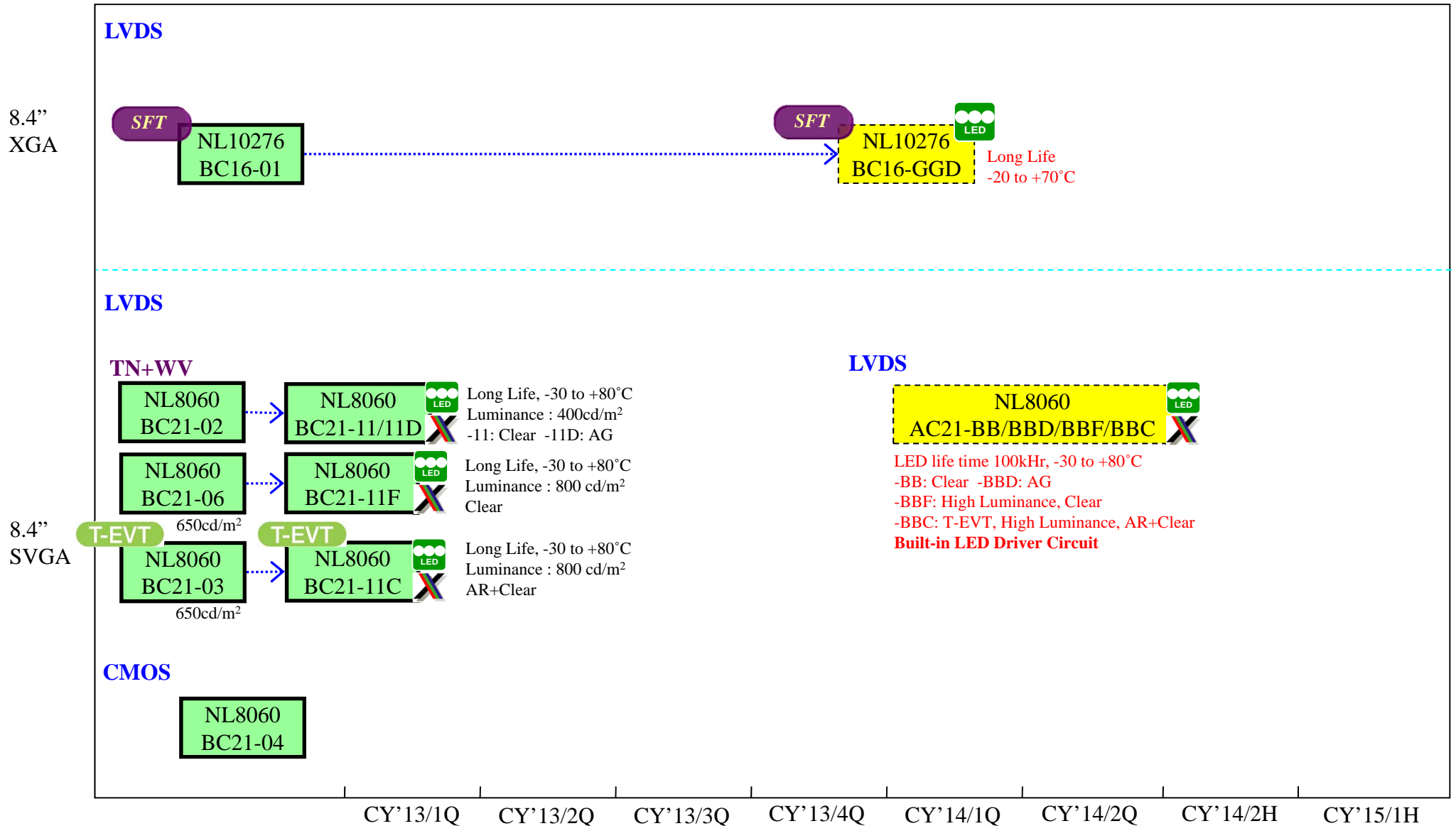
- Mass Production
- Under Development
- Under Planning


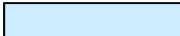

# Products Roadmap for Industrial — 8.4” Part 1 —

Jan. 10th, 2013

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 Mass Production  
 Under Development  
 Under Planning

# Products Roadmap for Industrial — 8.4” Part 2 —

Jan. 10th, 2013

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Ver.13.1



8.4”  
VGA

## LVDS

LVDS (6bit + FRC 2bit) 16,777,216 / 262,144color,  
400cd/m<sup>2</sup>, 800:1, 20ms, 72%,  
88°/ 88°, 88°/ 88° (U/D, R/L), -10 to +70°C

**SFT**

**NL6448**  
**BC26-08D**

**SFT**

**NL6448**  
**AC26-BBD**

Long Life, -20 to +70°C, AG  
**Built-in LED Driver Circuit**

## TN+WV

**NL6448**  
**BC26-27/27D**

Long Life, -30 to +80°C  
Luminance : 500 cd/m<sup>2</sup>  
-27: Clear -27D: AG

**NL6448**  
**BC26-27F**

Long Life -30 to +80°C  
Luminance : 900 cd/m<sup>2</sup>  
Clear

**NL6448**  
**BC26-27C**

Long Life -30 to +80°C  
Luminance : 900 cd/m<sup>2</sup>  
AR+Clear

## CMOS

**NL6448**  
**BC26-09/09D**

450cd/m<sup>2</sup>  
-09: Clear -09D: AG

**NL6448**  
**BC26-26/26D**

Long Life, -30 to +80°C  
Luminance : 500 cd/m<sup>2</sup>  
-26: Clear -26D:AG

**NL6448**  
**BC26-26F**

Long Life, -30 to +80°C  
Luminance : 900 cd/m<sup>2</sup>  
Clear

**NL6448**  
**BC26-09C**

750cd/m<sup>2</sup>  
AR+Clear

**NL6448**  
**BC26-26C**

Long Life, -30 to +80°C  
Luminance : 900 cd/m<sup>2</sup>  
AR+Clear

## CMOS


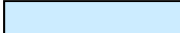

**NL6448**  
**AC26-GG/GGD/GGF/GGC**

LED life time 100kHr, -30 to +80°C  
-GG: Clear -GGD: AG  
-GGF: High Luminance, Clear  
-GGC: T-EVT, High Luminance, AR+Clear  
**Built-in LED Driver Circuit**

**NL6448**  
**AC26-47D**

LED life time 100kHr  
310 cd/m<sup>2</sup>, -20 to +70°C, AG  
No mounting compatibility with -26D  
**Built-in LED Driver Circuit**

CY'13/1Q    CY'13/2Q    CY'13/3Q    CY'13/4Q    CY'14/1Q    CY'14/2Q    CY'14/2H    CY'15/1H

 Mass Production  
 Under Development  
 Under Planning

# Products Roadmap for Industrial — 10.4” Part 1 —

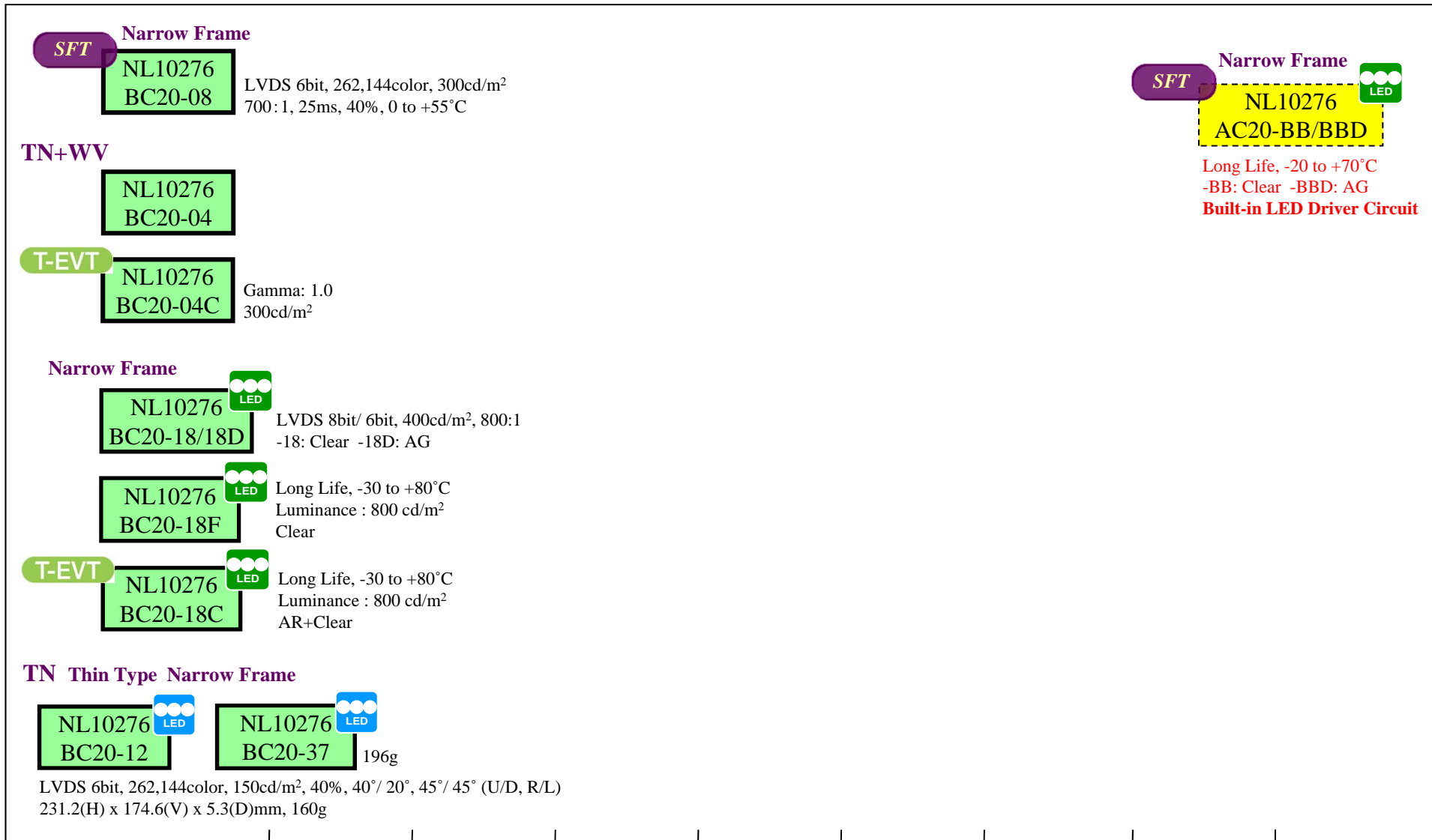
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10.4”  
XGA



CY'13/1Q    CY'13/2Q    CY'13/3Q    CY'13/4Q    CY'14/1Q    CY'14/2Q    CY'14/2H    CY'15/1H

- Mass Production
- Under Development
- Under Planning

# Products Roadmap for Industrial — 10.4” Part 2 —

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10.4”  
SVGA

### CMOS

SFT

NL8060  
BC26-27

SFT

NL8060  
AC26-XX



Long Life  
-20 to +70°C  
Built-in LED Driver Circuit

### LVDS

SFT

NL8060  
BC26-28

400cd/m<sup>2</sup>, -10 to +70°C

SFT

NL8060  
AC26-ZZ



Long Life  
-20 to +70°C  
Built-in LED Driver Circuit

### LVDS

TN+WV

NL8060  
BC26-30D

NL8060  
BC26-35/35D



Long Life, -30 to +80°C  
Luminance : 400cd/m<sup>2</sup>  
-35: Clear -35D: AG

NL8060  
BC26-35F



Long Life, -30 to +80°C  
Luminance : 800cd/m<sup>2</sup>  
Clear

T-EVT

NL8060  
BC26-30C

550cd/m<sup>2</sup>, AR+Clear

T-EVT

NL8060  
BC26-35C



Long Life, -30 to +80°C  
Luminance : 800cd/m<sup>2</sup>  
AR+Clear

### LVDS

NL8060  
AC26-GG/GGD/GGF/GGC



LED life time 100kHr, -30 to +80°C  
-GG: Clear -GGD: AG  
-GGF: High Luminance, Clear  
-GGC: T-EVT, High Luminance, AR+Clear  
Built-in LED Driver Circuit

CY'13/1Q

CY'13/2Q

CY'13/3Q




CY'13/4Q

CY'14/1Q

CY'14/2Q

CY'14/2H

CY'15/1H

 Mass Production  
 Under Development  
 Under Planning

# Products Roadmap for Industrial — 10.4” Part 3 —

Jan. 10th, 2013  
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## CMOS


**SFT**

NL6448  
BC33-74

**TN+WW**


NL6448   
BC33-70/70D

Long Life, -30 to +80°C  
Luminance : 450cd/m<sup>2</sup>  
70: Clear 70D: AG


NL6448   
BC33-70F

Long Life, -30 to +80°C  
Luminance : 900cd/m<sup>2</sup>  
Clear

**T-EVT**


NL6448   
BC33-70C

Long Life, -30 to +80°C  
Luminance : 900cd/m<sup>2</sup>  
AR+Clear

NL6448   
AC33-97D

LED life time 100kHr  
300cd/m<sup>2</sup>, -20 to +70°C, AG  
No mounting compatibility with -70D  
**Built-in LED Driver Circuit**

## CMOS


NL6448   
AC33-BB/BBD/BBF/BBC

LED life time 100kHr, -30 to +80°C  
-BB: Clear -BBD: AG  
-BBF: High Luminance, Clear  
-BBC: T-EVT, High Luminance, AR+Clear  
**Built-in LED Driver Circuit**


10.4”  
VGA

## LVDS


**TN+WW**

NL6448   
BC33-63D

LVDS 8bit/ 6bit  
1,677,216 / 262,144color


NL6448   
BC33-71/71D

Long Life, -30 to +80°C  
Luminance : 450cd/m<sup>2</sup>  
-71: Clear -71D: AG

NL6448   
BC33-71F


900cd/m<sup>2</sup>  
Clear

**T-EVT**

NL6448   
BC33-63C

Surface treatment : AR+Clear

**T-EVT**

NL6448   
BC33-71C

900cd/m<sup>2</sup>  
AR+Clear

CY'13/1Q    CY'13/2Q    CY'13/3Q    CY'13/4Q    CY'14/1Q    CY'14/2Q    CY'14/2H    CY'15/1H



- Mass Production
- Under Development
- Under Planning

# Products Roadmap for Industrial — 12.1” Part 1 —

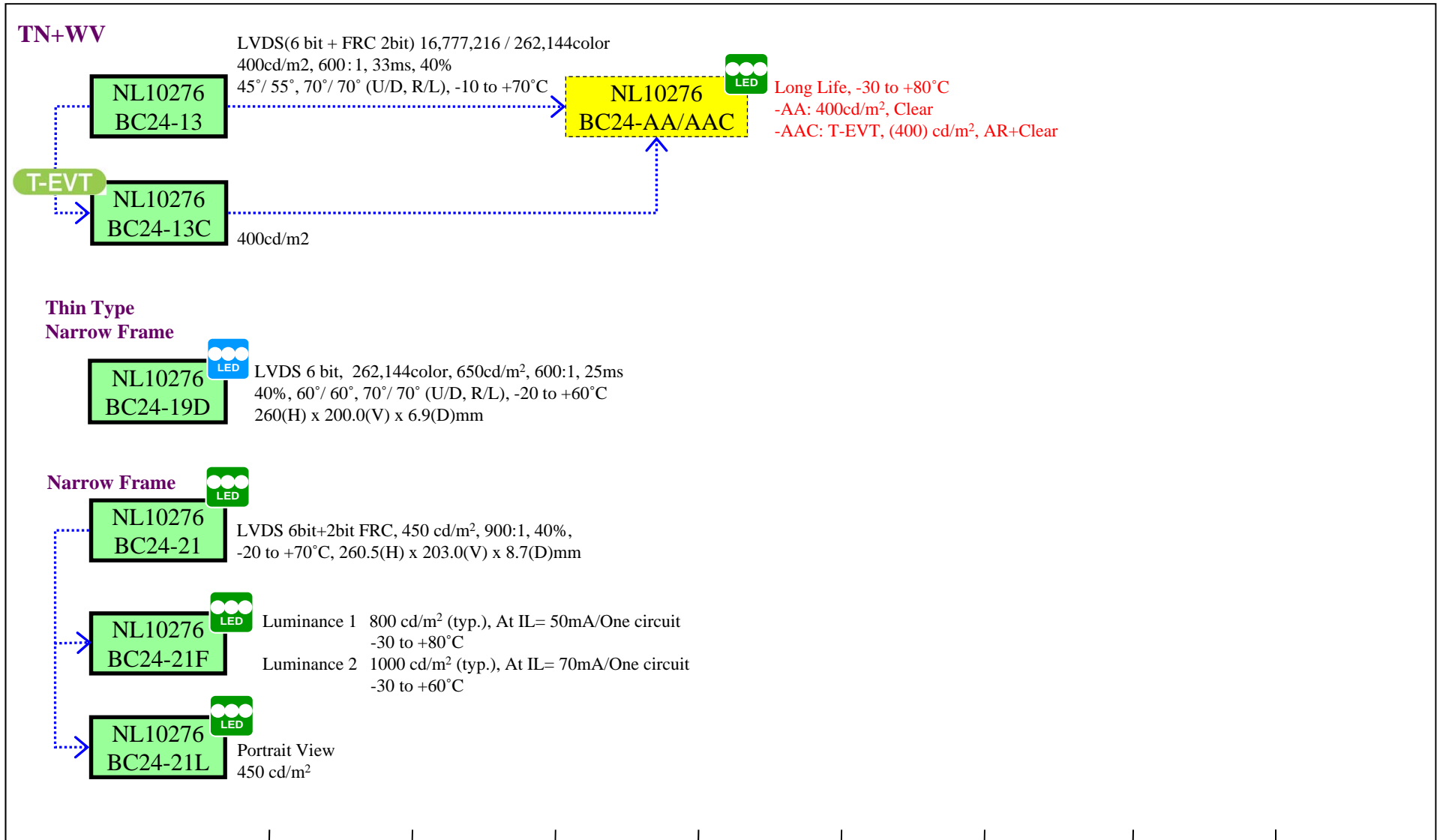
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12.1”  
XGA



CY'13/1Q    CY'13/2Q    CY'13/3Q    CY'13/4Q    CY'14/1Q    CY'14/2Q    CY'14/2H    CY'15/1H

- Mass Production
- Under Development
- Under Planning

# Products Roadmap for Industrial — 12.1” Part 2 —

Jan. 10th, 2013

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Ver.13.1



## LVDS

### TN+WW

**NL8060**  
BC31-41D

**NL8060**  
BC31-47/47D



Long Life, -30 to +80°C  
Luminance : 450cd/m<sup>2</sup>  
47: Clear 47D: AG

LVDS(6bit+FRC 2bit) 16,777,216 / 262,144color  
400cd/m<sup>2</sup>, 600:1, 25ms, 40%, 80°/ 60°, 80°/ 80° (U/D, R/L)  
-20 to +70°C, AG

### T-EVT

**NL8060**  
BC31-41C

550cd/m<sup>2</sup>  
AR+Clear

**NL8060**  
BC31-41E

AG  
Change pin assignment

12.1”  
SVGA

### Narrow Frame

**NL8060**  
AC31-AA/AAD/AAF/AAC



LED life time 100kHr, -30 to +80°C  
-AA: 450cd/m<sup>2</sup>, Clear  
-AAD: 450cd/m<sup>2</sup>, AG  
-AAF: 900cd/m<sup>2</sup>, Clear  
-AAC: T-EVT, 900cd/m<sup>2</sup>, AR+Clear  
**Built-in LED Driver Circuit**

## CMOS

### TN+WW

#### Narrow Frame

**NL8060**  
BC31-50F



CMOS 6bit, 262,144color, 900cd/m<sup>2</sup>  
1000:1, 40%, -30 to +80°C  
260.5(H) x 203.0(V) x 8.7(D)mm

**NL8060**  
BC31-42/42D

-42: Clear -42D: AG

CY'13/1Q    CY'13/2Q    CY'13/3Q    CY'13/4Q    CY'14/1Q    CY'14/2Q    CY'14/2H    CY'15/1H

- Mass Production
- Under Development
- Under Planning

# Products Roadmap for Industrial — 15” Part 1 —

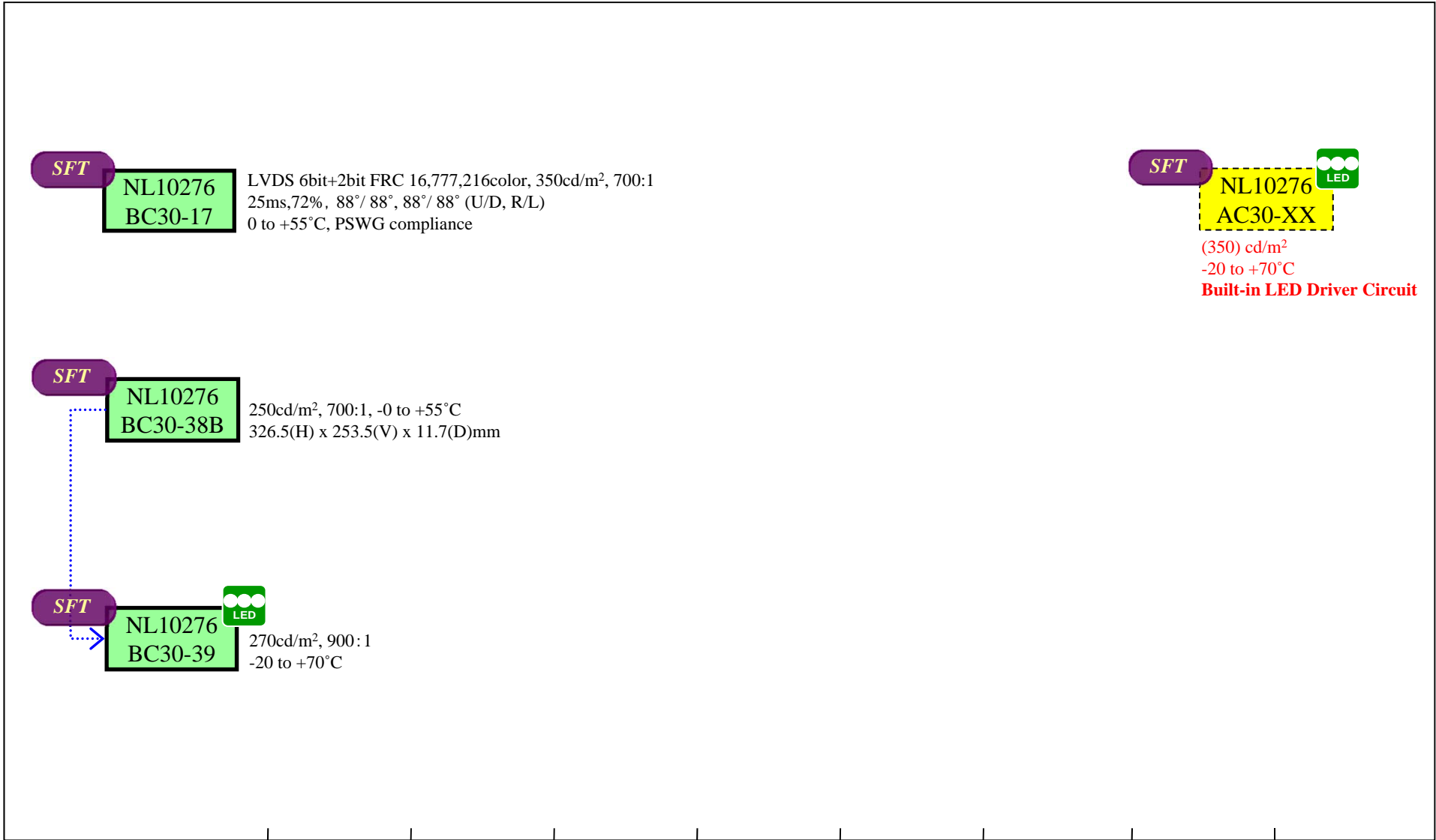
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15”  
XGA



- Mass Production
- Under Development
- Under Planning

# Products Roadmap for Industrial — 15” Part 2 —

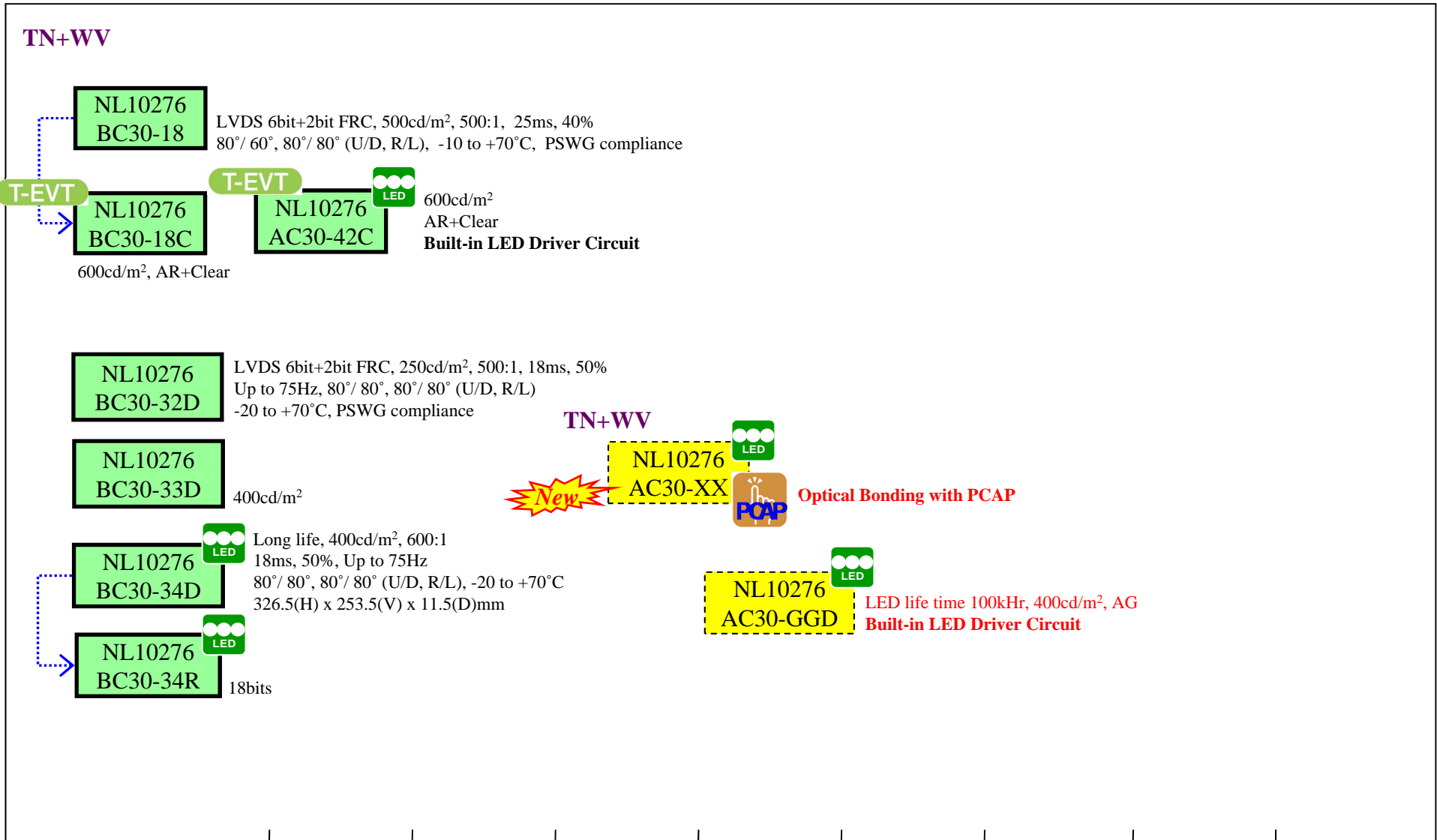
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15”  
XGA



CY'13/Q1    CY'13/Q2    CY'13/Q3    CY'13/Q4    CY'14/Q1    CY'14/Q2    CY'14/2H    CY'15/H1

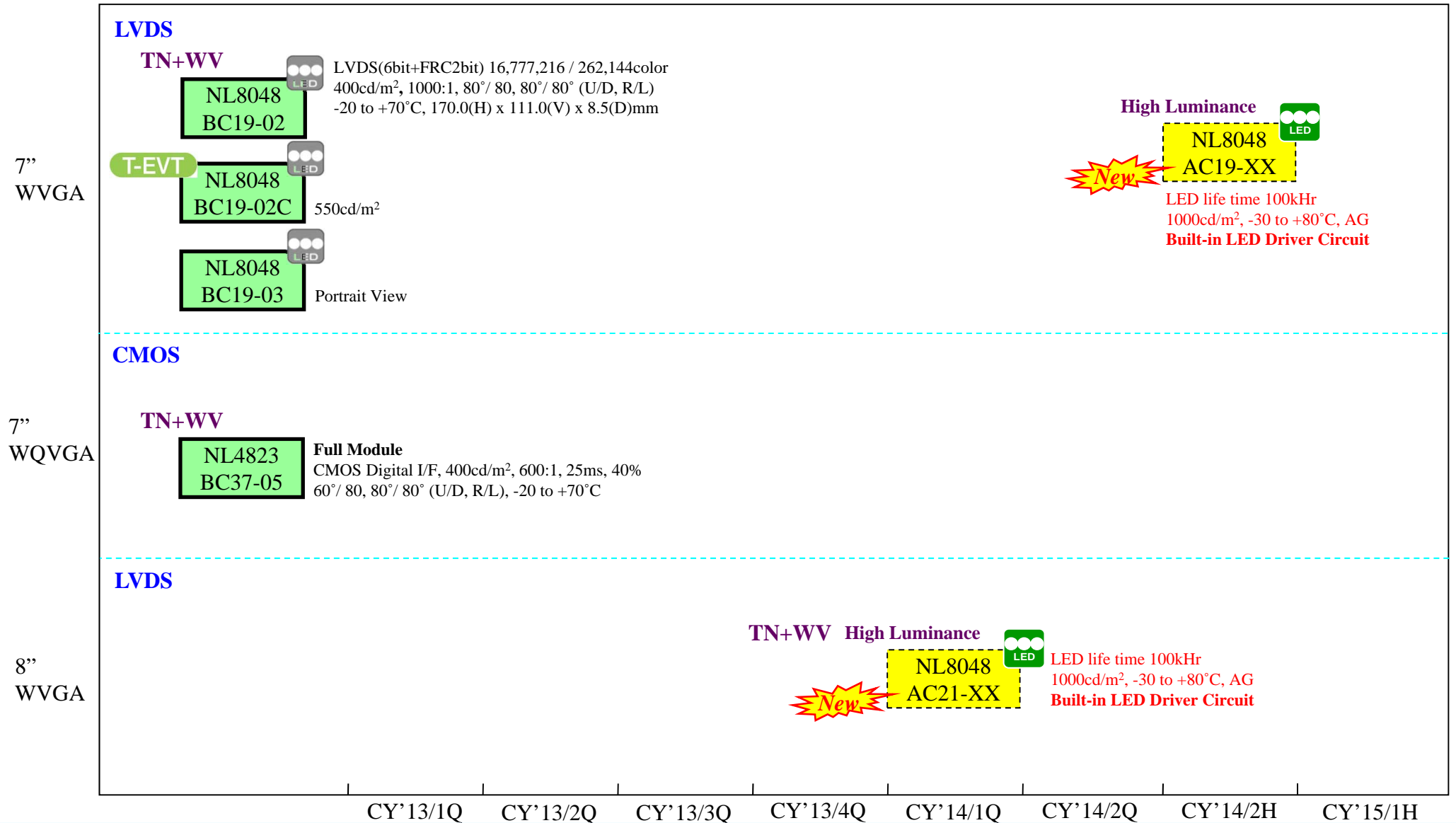
 Mass Production  
 Under Development  
 Under Planning




# Products Roadmap for Industrial — 7” - 8.9” Wide —

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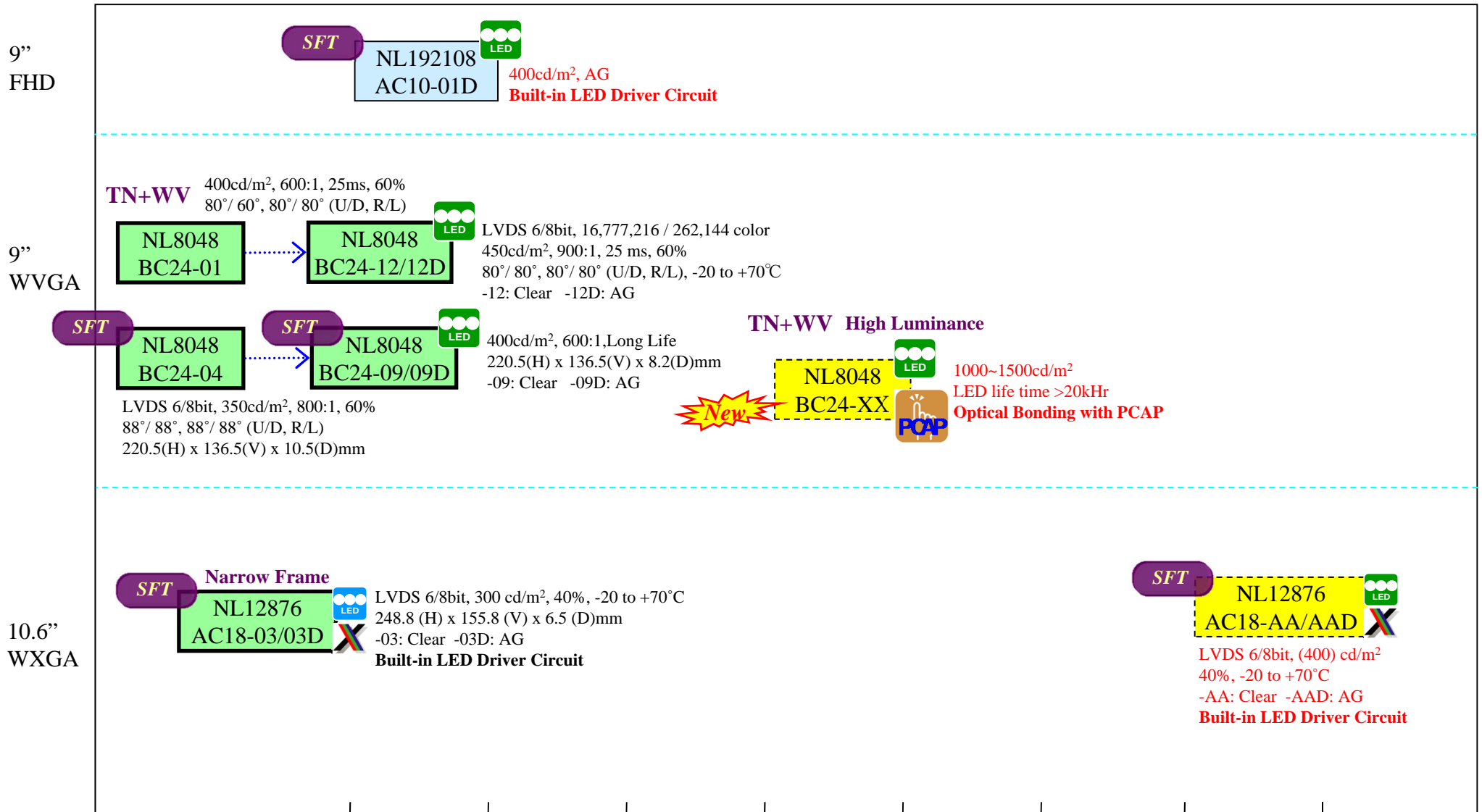
 Mass Production  
 Under Development  
 Under Planning

# Products Roadmap for Industrial — 9” - 11.1” Wide —

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CY'13/1Q    CY'13/2Q    CY'13/3Q    CY'13/4Q    CY'14/1Q    CY'14/2Q    CY'14/2H    CY'15/1H

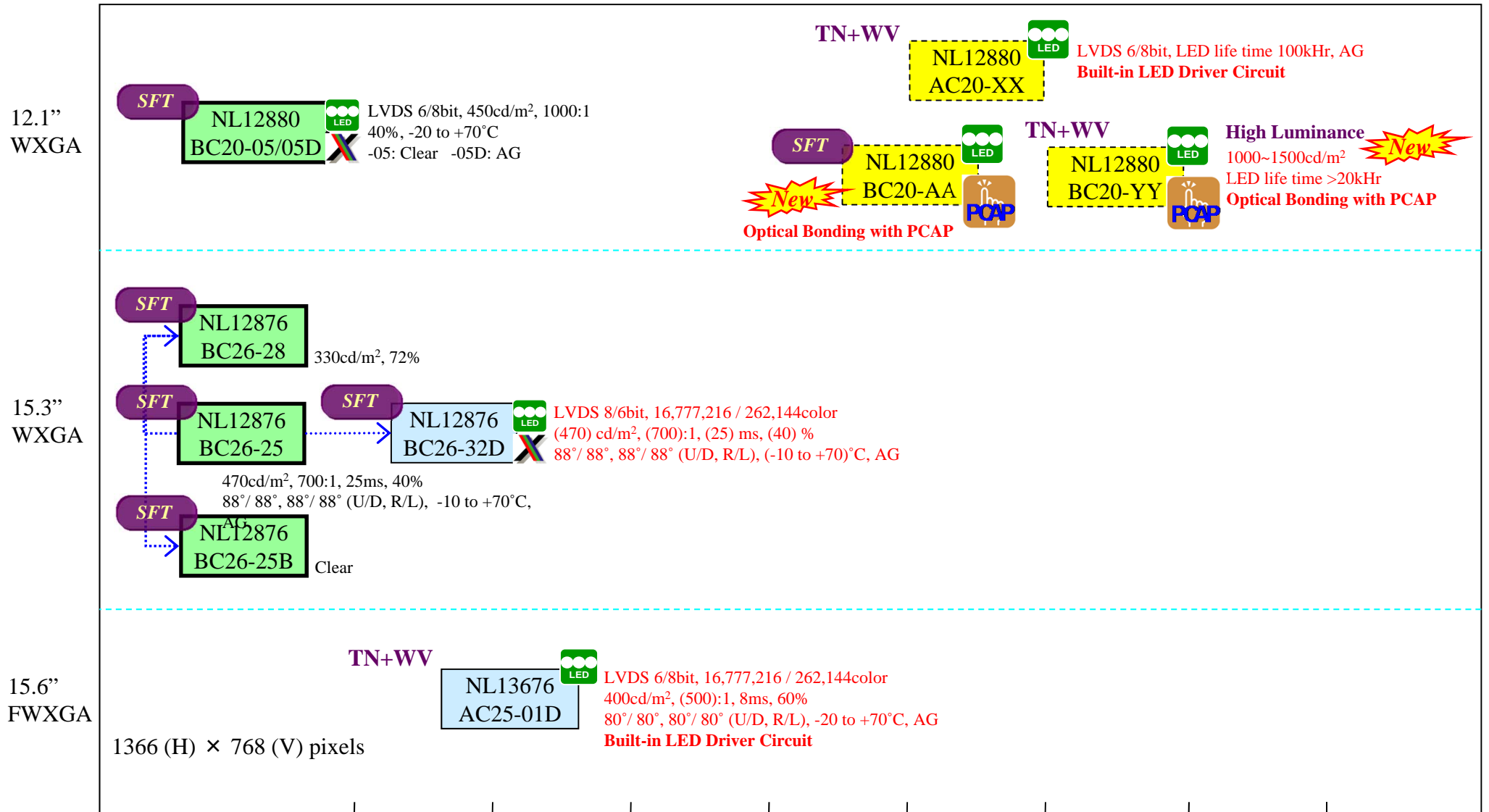
Mass Production  
 Under Development  
 Under Planning

# Products Roadmap for Industrial — 12.1” - 15.6” Wide —

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CY'13/Q1    CY'13/Q2    CY'13/Q3    CY'13/Q4    CY'14/Q1    CY'14/Q2    CY'14/2H    CY'15/H1