A∨aGO
T E C H N O L O G I E S

Application Brief

Introduction

There are two Avago LED part numbering system, namely:

1. Existing LED Part Numbering System (shown in section 1)
2. New LED Part Numbering System (shown in Section 2)

The existing Avago Part Numbering System differs from product family to product family and will continue to be applicable for existing products. The New LED Part Numbering System incorporates Avago Brand Identification with more standardized features and will only be applicable for new Avago LEDs.

This document is intended as a general guide to the part numbering systems employed by each part family. This document is not intended as a selection guide and does not contain parametric values for specific devices. For further information on specifics products, please refer to the respective Product Technical Data Sheet.

Some part number may not appear to fall in the categories contained herein -- this does not indicate obsolescence but rather the specific part number may not exactly match the generalizations in this document. For those part numbers not exactly matching the descript ion in this document, please download the appropriate Product Technical Data Sheet from Avago Website (www.avagotech.com) or contact the nearest Avago Representative.

Section 1:
Index of Part Numbering System

For convenience, two indexes are provided in this document – one sorted by Product Family (Table 1) and the other sorted by Part Number (Table 2).

Table 1. Index of Part Numbering System by Product Family

Product Family	Description	Figure
Through-Hole Lamps	3mm, 4mm, 5mm Round and Oval Through-Hole LED Lamps	Figure 1a, Figure 1b
SMT PLCC	Surface Mountable LED Lamps	Figure 2a, Figure 2b
Color Sensor & Controller	Color Sensor	Figure 3
	Color Controller	Figure 4

Table 2. Index of Part Numbering System Sorted by Part Number

Part Number	Description / Product Family	Figure
HLMP-Axxx-xxxxx	Through-Hole Lamps	Figure 1a, Figure 1b
HLMP-Bxxx-xxxxx		
HLMP-Cxxx-xxxxx		
HLMP-Dxxx-xxxxx		
HLMP-Exxx-xxxxx		
HLMP-Fxxx-xxxxx		
HLMP-Gxxx-xxxxx		
HLMP-Hxxx-xxxxx		
HLMP-Kxxx-xxxxx		
HLMP-Lxxx-xxxxx		
HLMP-Mxxx-xxxxx		
HLMP-Rxxx-xxxxx		
HLMP-Sxxx-xxxxx		
HLMP-Wxxx-xxxxx		
HSMA-Axxx-xxxxx	SMT PLCC	Figure 2a, Figure 2b
HSMB-Axxx-xxxxx		
HSMC-Axxx-xxxxx		
HSMD-Axxx-xxxxx		
HSME-Axxx-xxxxx		
HSMF-Axxx-xxxxx		
HSMG-Axxx-xxxxx		
HSMH-Axxx-xxxxx		
HSMJ-Axxx-xxxxx		
HSMK-Axxx-xxxxx		
HSML-Axxx-xxxxx		
HSMM-Axxx-xxxxx		
HSMN-Axxx-xxxxx		
HSMS-Axxx-xxxxx		
HSMU-Axxx-xxxxx		
HSMV-Axxx-xxxxx		
HSMW-Axxx-xxxxx		
HSMY-Axxx-xxxxx		
HSMZ-Axxx-xxxxx		
HDJD-Jxxx-xxxxx	Color Sensor & Controller	Figure 3, Figure 4
HDJD-Sxxx-xxxxx		

Note:
1. For codes not listed in this table, please refer to the respective data sheet or contact nearest Avago representative for details.

HLMP - x x x x - x x x x x

→ **Device Specification Configuration**

→ **Color**

B	: Blue (470/ 472nm)
D	: Red (630nm)
E	: Cyan (505nm)
G	: Red (626nm)
H	: Red-Orange (615/617nm)
J	: Orange (605nm)
L	: Amber (590/592nm)
M	: Green (525/526nm)
W	: White
Y	: Warm White

→ **Package**

A	: 5mm Mini Oval
B	: 5mm Mini Oval
C	: 5mm Round InGaN
D	: 5mm Round AlInGaP
E	: 5mm Round AlInGaP
F	: 5mm Round Flat Top
G	: 5mm Round AlInGaP
H	: 5mm Standard Oval
K	: 3mm Round
L	: 4mm Standard Oval
M	: 4mm Standard Oval AlInGaP
R	: 4mm Super Oval AlInGaP
W	: 5mm Round
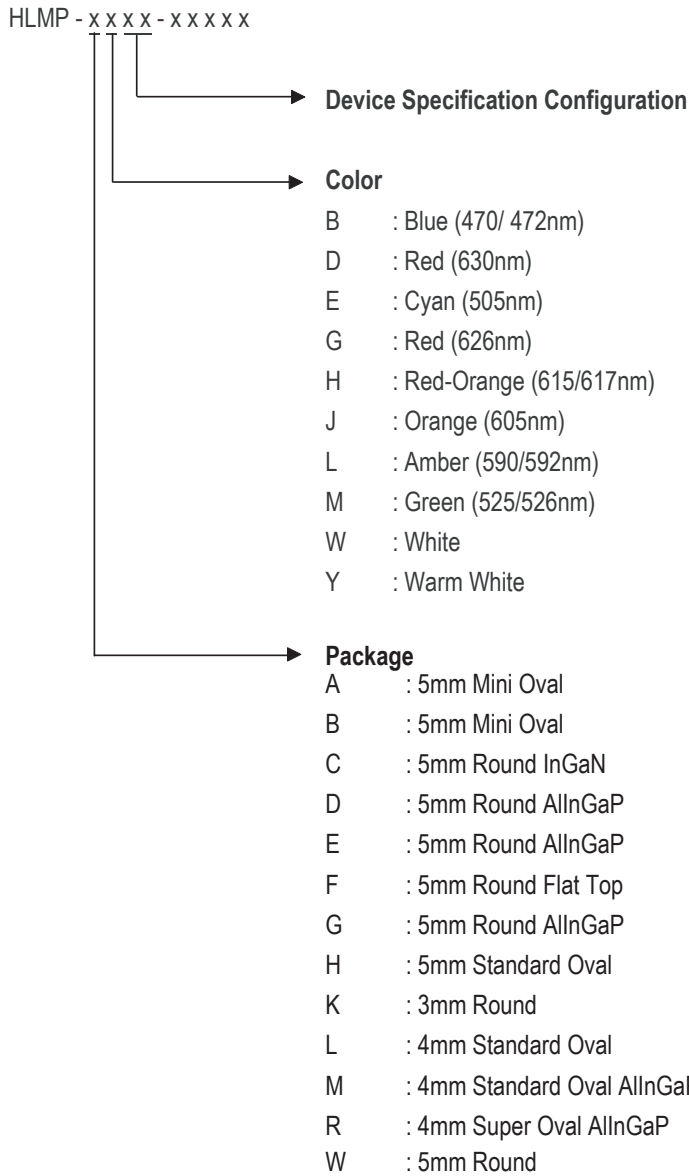
Figure 1a: Through-Hole Lamps

Notes:
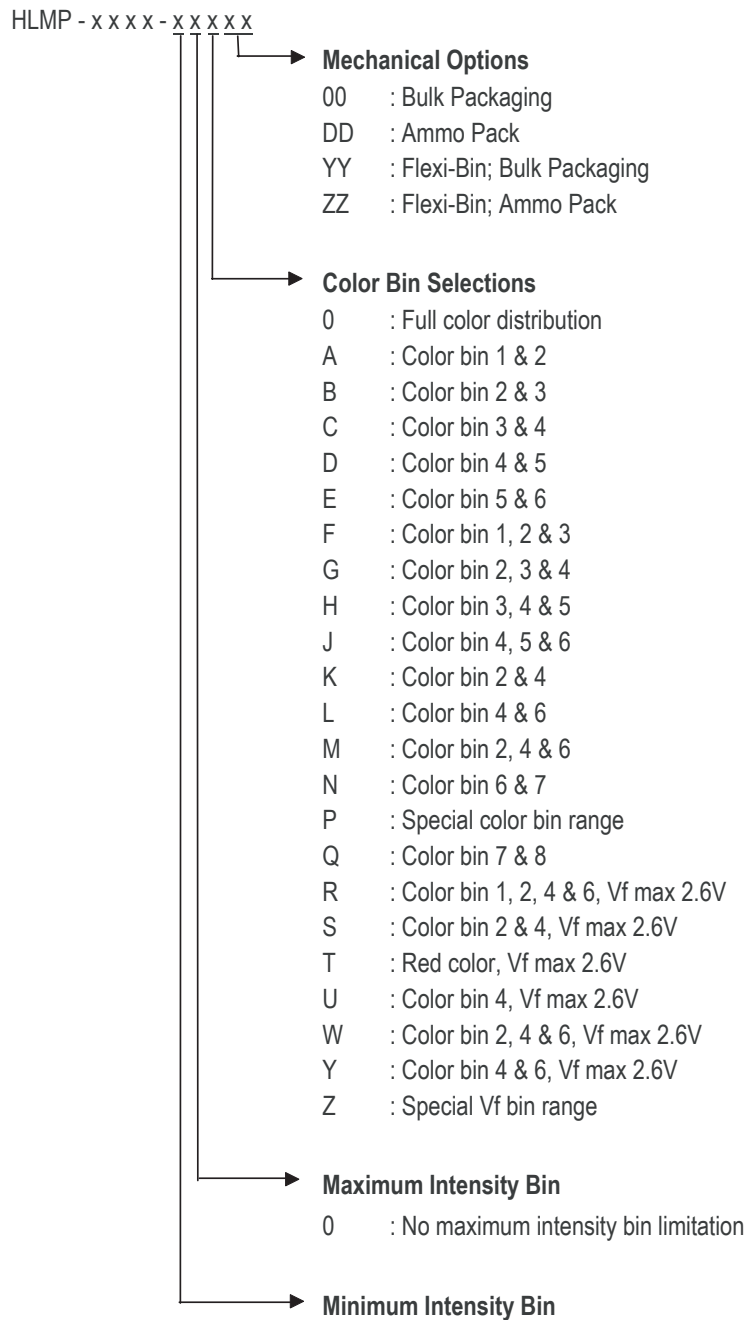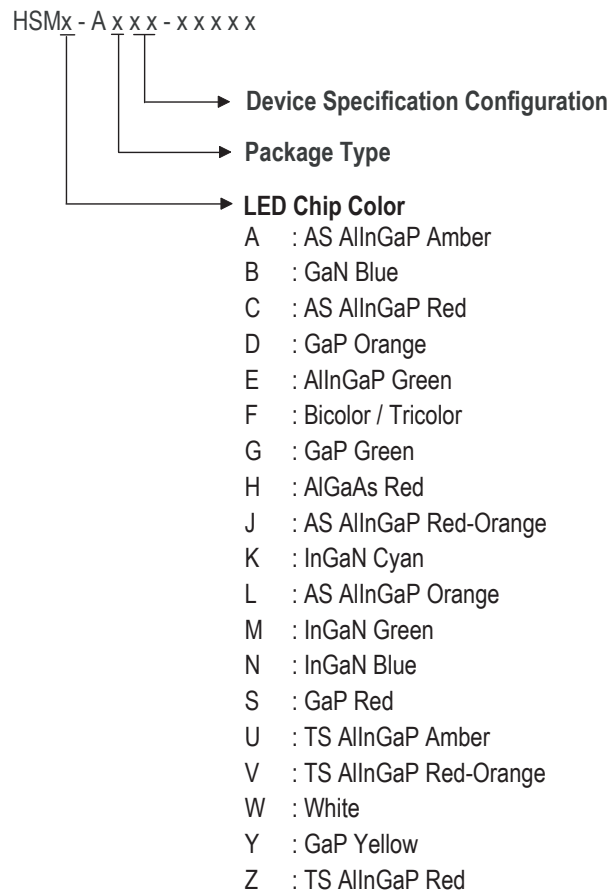1. For codes not listed in this table, please refer to the respective data sheet or contact nearest Avago representative for details.
2. Bin options refer to shippable bins for a part number. Color and intensity bins are typically restricted to 1 bin per bulk pack, ammo pack or reel (exceptions may apply). Please refer to respective data sheet for specific bin limit information.

HLMP - x x x x - x x x x x

Mechanical Options

00	: Bulk Packaging
DD	: Ammo Pack
YY	: Flexi-Bin; Bulk Packaging
ZZ	: Flexi-Bin; Ammo Pack

Color Bin Selections

0	: Full color distribution
A	: Color bin 1 & 2
B	: Color bin 2 & 3
C	: Color bin 3 & 4
D	: Color bin 4 & 5
E	: Color bin 5 & 6
F	: Color bin 1, 2 & 3
G	: Color bin 2, 3 & 4
H	: Color bin 3, 4 & 5
J	: Color bin 4, 5 & 6
K	: Color bin 2 & 4
L	: Color bin 4 & 6
M	: Color bin 2, 4 & 6
N	: Color bin 6 & 7
P	: Special color bin range
Q	: Color bin 7 & 8
R	: Color bin 1, 2, 4 & 6, Vf max 2.6V
S	: Color bin 2 & 4, Vf max 2.6V
T	: Red color, Vf max 2.6V
U	: Color bin 4, Vf max 2.6V
W	: Color bin 2, 4 & 6, Vf max 2.6V
Y	: Color bin 4 & 6, Vf max 2.6V
Z	: Special Vf bin range

Maximum Intensity Bin

0	: No maximum intensity bin limitation

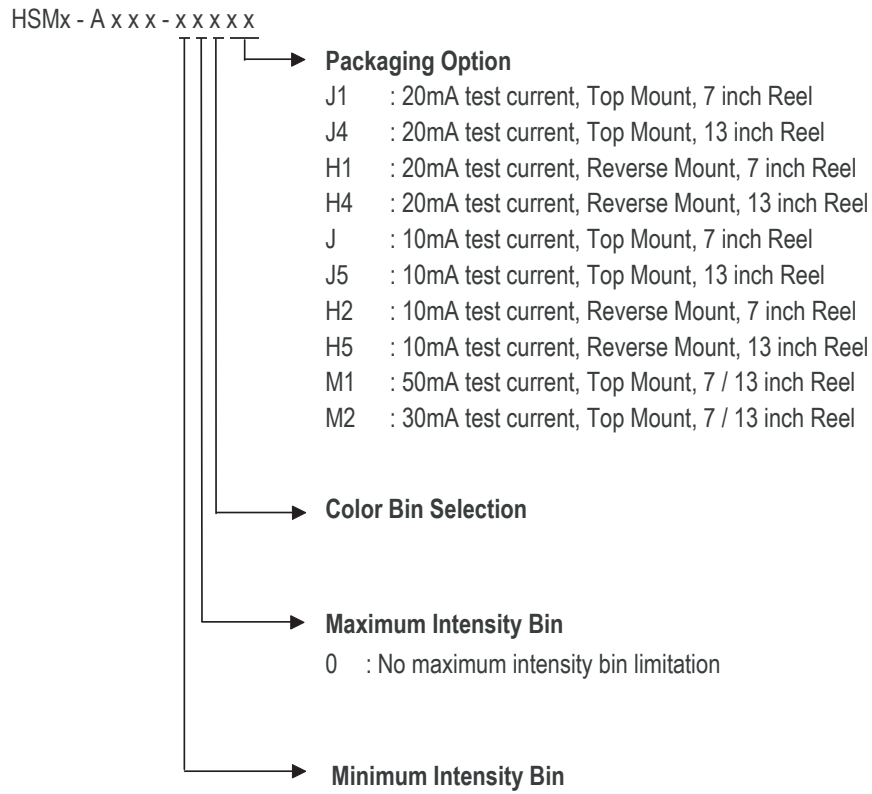**Minimum Intensity Bin**

Figure 1b: Through-Hole Lamps

Notes:
1. For codes not listed in this table, please refer to the respective data sheet or contact nearest Avago representative for details.
2. Bin options refer to shippable bins for a part number. Color and intensity bins are typically restricted to 1 bin per bulk pack, ammo pack or reel (exceptions may apply). Please refer to respective data sheet for specific bin limit information.

HSMx - A x x x - x x x x x

Device Specification Configuration

Package Type

LED Chip Color

A   : AS AlInGaP Amber
B   : GaN Blue
C   : AS AlInGaP Red
D   : GaP Orange
E   : AlInGaP Green
F   : Bicolor / Tricolor
G   : GaP Green
H   : AlGaAs Red
J   : AS AlInGaP Red-Orange
K   : InGaN Cyan
L   : AS AlInGaP Orange
M   : InGaN Green
N   : InGaN Blue
S   : GaP Red
U   : TS AlInGaP Amber
V   : TS AlInGaP Red-Orange
W   : White
Y   : GaP Yellow
Z   : TS AlInGaP Red
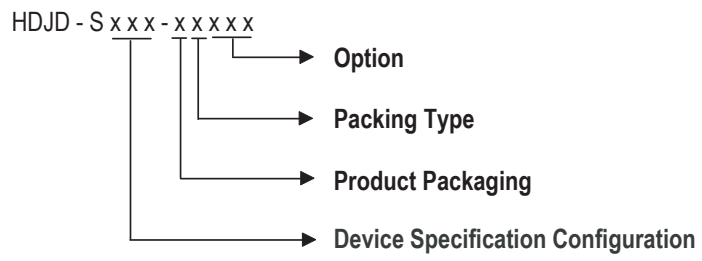
Figure 2a: SMT PLCC

Notes:
1. For codes not listed in this table, please refer to the respective data sheet or contact nearest Avago representative for details.
2. Bin options refer to shippable bins for a part number. Color and intensity bins are typically restricted to 1 bin per bulk pack, ammo pack or reel (exceptions may apply). Please refer to respective data sheet for specific bin limit information.

HSMx - A x x x - x x x x x

Packaging Option

J1 : 20mA test current, Top Mount, 7 inch Reel
J4 : 20mA test current, Top Mount, 13 inch Reel
H1 : 20mA test current, Reverse Mount, 7 inch Reel
H4 : 20mA test current, Reverse Mount, 13 inch Reel
J : 10mA test current, Top Mount, 7 inch Reel
J5 : 10mA test current, Top Mount, 13 inch Reel
H2 : 10mA test current, Reverse Mount, 7 inch Reel
H5 : 10mA test current, Reverse Mount, 13 inch Reel
M1 : 50mA test current, Top Mount, 7 / 13 inch Reel
M2 : 30mA test current, Top Mount, 7 / 13 inch Reel

Color Bin Selection

Maximum Intensity Bin

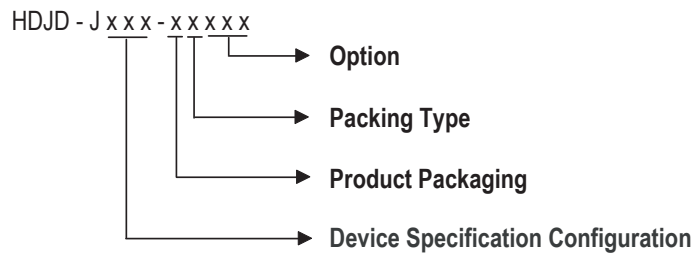0 : No maximum intensity bin limitation

Minimum Intensity Bin

Figure 2b: SMT PLCC

Notes:
1. For codes not listed in this table, please refer to the respective data sheet or contact nearest Avago representative for details.
2. Bin options refer to shippable bins for a part number. Color and intensity bins are typically restricted to 1 bin per bulk pack, ammo pack or reel (exceptions may apply). Please refer to respective data sheet for specific bin limit information.

HDJD - S x x x - x x x x x

        → **Option**

        → **Packing Type**

        → **Product Packaging**

        → **Device Specification Configuration**

Figure 3: Color Sensor

HDJD - J x x x - x x x x x

        → **Option**

        → **Packing Type**

        → **Product Packaging**

        → **Device Specification Configuration**

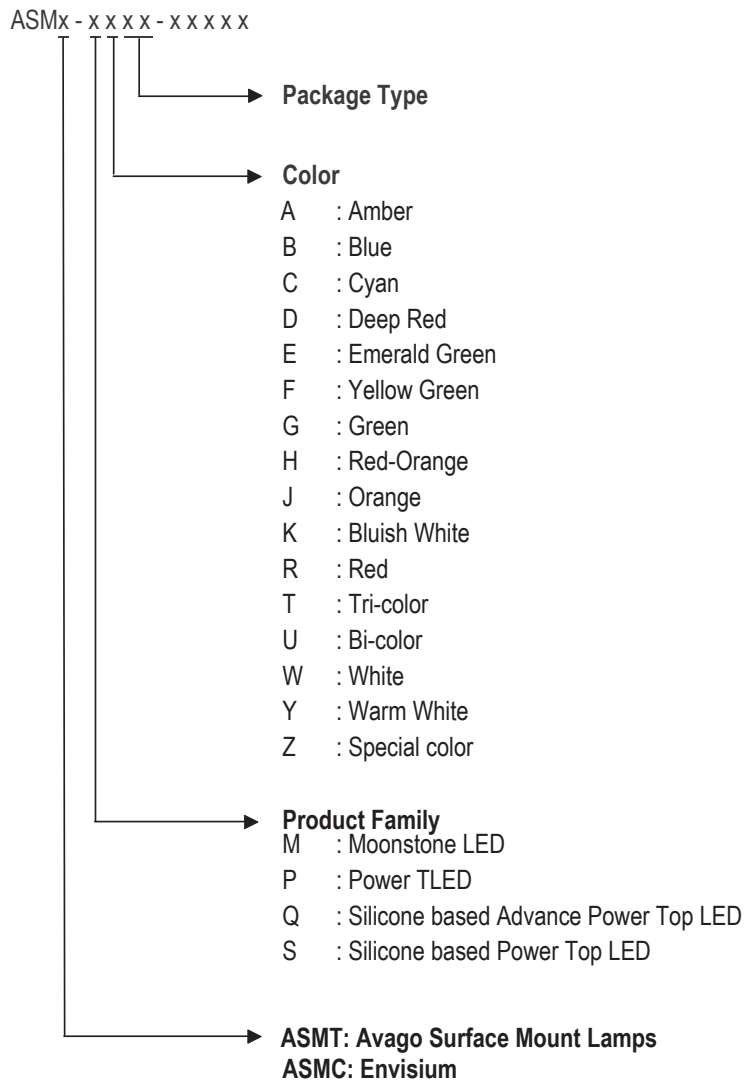**Figure 4: Color Controller**

Section 2:

Table 3. Index of New Part Numbering System

Part Numbering System	Product Family	Figure
ASMT-xxxx-xxxxx ASMC-xxxx-xxxxx	Surface Mount Lamps	Figure 5a, Figure 5b
ADJD-xxxx	Backlighting / High Power LED	Figure 6
ADJD-Sxxx-xxxxx	Color Sensor	Figure 7
ADJD-Jxxx-xxxxx	Color Controller	Figure 8

ASMx - x x x x - x x x x x

Package Type

Color
A : Amber
B : Blue
C : Cyan
D : Deep Red
E : Emerald Green
F : Yellow Green
G : Green
H : Red-Orange
J : Orange
K : Bluish White
R : Red
T : Tri-color
U : Bi-color
W : White
Y : Warm White
Z : Special color

Product Family
M : Moonstone LED
P : Power TLED
Q : Silicone based Advance Power Top LED
S : Silicone based Power Top LED
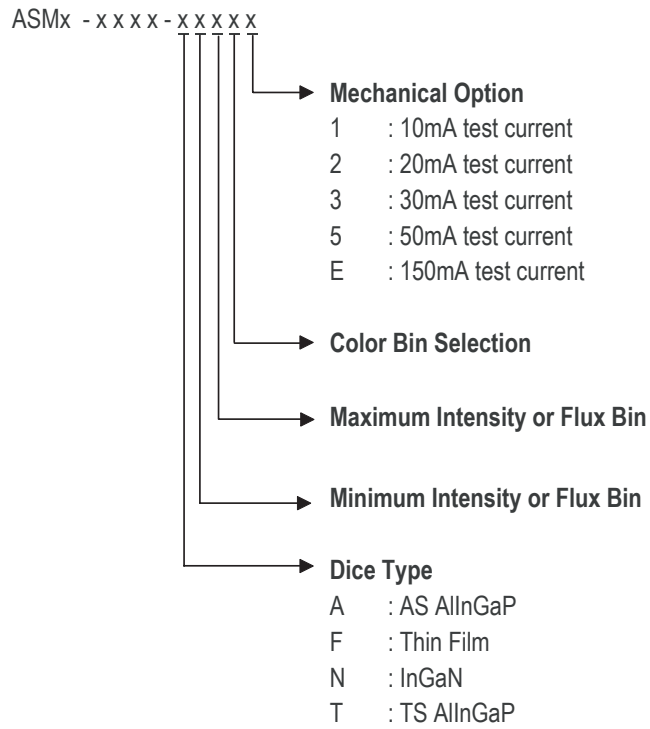
ASMT: Avago Surface Mount Lamps
ASMC: Envisium

Figure 5a: New 'A' Series part number structure for Surface Mount Lamps

ASMx - x x x x - x x x x x

→ **Mechanical Option**
　　1　　: 10mA test current
　　2　　: 20mA test current
　　3　　: 30mA test current
　　5　　: 50mA test current
　　E　　: 150mA test current

→ **Color Bin Selection**

→ **Maximum Intensity or Flux Bin**

→ **Minimum Intensity or Flux Bin**

→ **Dice Type**
　　A　　: AS AlInGaP
　　F　　: Thin Film
　　N　　: InGaN
　　T　　: TS AlInGaP

Figure 5b: New 'A' Series part number structure for Surface Mount Lamps

ADJD - x x x x

→ **Device Specification Configuration**

→ **Package Type**
　　D　　: Dazzle
　　J　　: Juk Ga Rak
　　L　　: Leukos
　　M　　: Moonstone Strip
　　T　　: Mini TLED
　　V　　: SensaLED Strip

→ **Package Category**
　　R　　: Red Color Discrete LED
　　G　　: Green Color Discrete LED
　　B　　: Blue Color Discrete LED
　　M　　: Multiple Colors Package
　　W　　: White / Cool White LED
　　Y　　: Warm White LED
　　Z　　: Level 2 Products
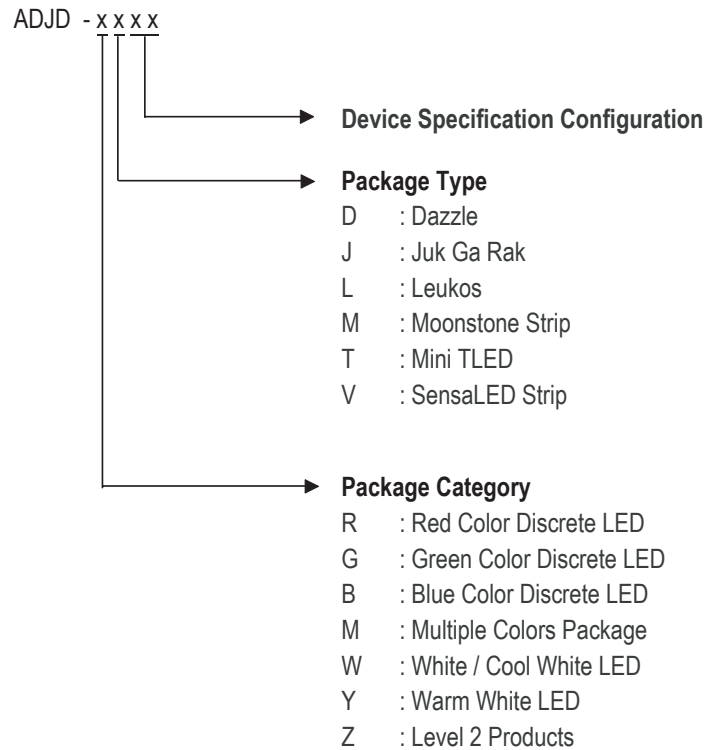
Figure 6: Backlighting/ High Power LED

ADJD - S x x x - x x x x x

➤ **Option**

➤ **Packing Type**

➤ **Product Packaging**

➤ **Device Specification Configuration**

Figure 7: Color Sensor

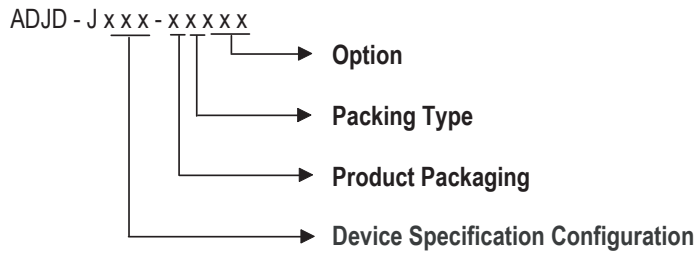ADJD - J x x x - x x x x x

➤ **Option**

➤ **Packing Type**

➤ **Product Packaging**

➤ **Device Specification Configuration**
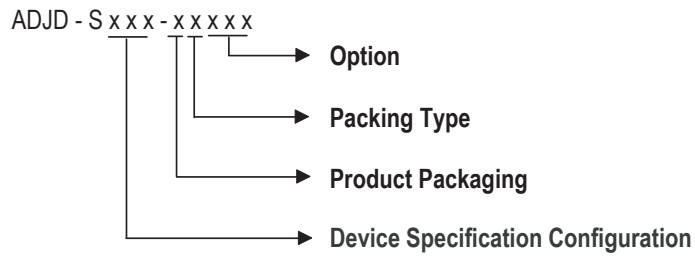
Figure 8: Color Controller

For product information and a complete list of distributors, please go to our web site: **www.avagotech.com**