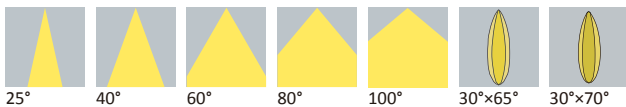


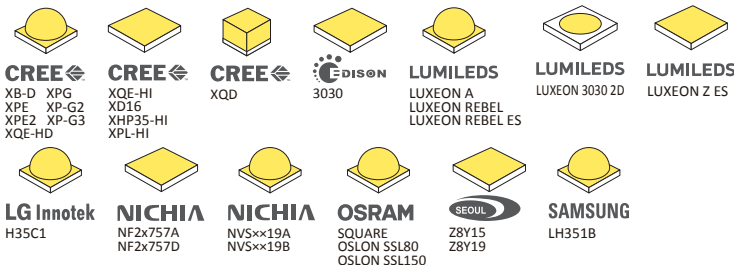
Datasheet

# DF & BDF Series

## Available Distribution



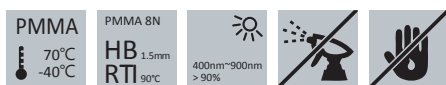
## LED



## Recommend Applications



## General Information



- Lens Material PMMA 8N
- Operating Temperature -40°C~+70°C
- UL Flammability HB @1.5mm
- UL RTI Elec 90°C @1.5mm
- Light Transmission Rate 400nm~900nm > 90%
- ☑ If necessary, Clean lenses with mild soap, water and soft cloth.
- ⚠ Never use any commercial cleaning solvents on lenses, like alcohol.
- ⚠ Please handle or install lenses with wearing gloves, skin oils may damage lens or its optical characteristic.

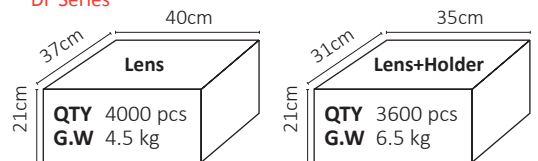
## Dimensions

Part Number	Diameter	Height
LL01CR-DFxxL06	Ø11.8	6.5
LL01CR-DFxxL06-M2-T		
LL01LU-DFxxL06-Mx-T		
LL01HS-DFxxL06-M2-T	Ø13.5	7.35
LL01CR-QKxxL06-Mx-T		
LL01OS-BDF25L06 / LL01CR-BDFxxL06	Ø11.8	6.55
LL01CR-BDFxxL06-Mx-T		
LL01CR-CRxxL06-Mx-T		
LL01LU-BDFxxL06-Mx-T	Ø13.5	7.35
LL01OS-BDFxxL06-Mx-T		
LL01RP-BDFxxL06-Mx-T		

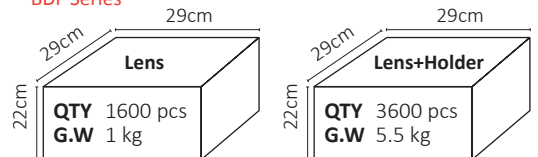
\*All dimensions are in millimeters.

## Packaging Details (SPQ)

### DF Series



### BDF Series



## Accessories



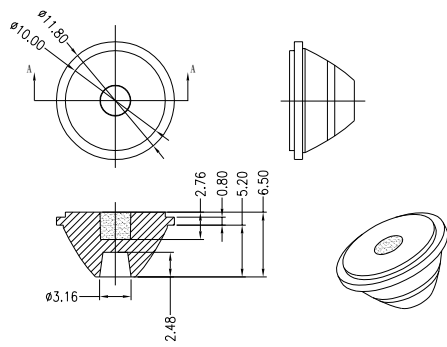
- 7 Different Types of Holder
  - LL01CRCR10H2
  - LL01LUCR10Hx
  - LL01CRMD25H2
  - LL01CRQK25Hx
  - LL01CROR25Hx
  - LL01OSRD40Hx
  - LL01CRRP25Hx
- 3 Different Types of Tape
  - LL01A00XHNX
  - LL01A00XH VX
  - LL01A00XSMX

# Mechanical Specification

\*All dimensions are in millimeters.

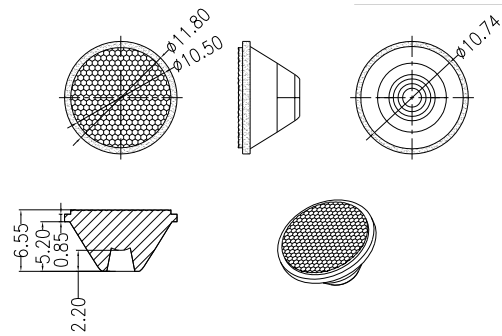
## Lens Dimension

LL01CR-DFxxL06



## Lens Dimension

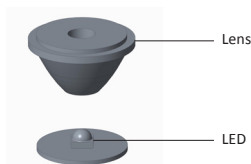
LL01OS-BDF25L06 / LL01CR-BDFxxL06 (40°/60°/30°x70°)



## Assembly Instruction

Fixing Method

Part No LED LL01CR-DFxxL06 / LL01xx-BDFxxL06  
CREE XQE-HD



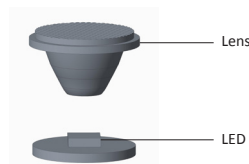
Lift lens and have its bottom aligned with the top of LED's light emitting surface.

## Assembly Instruction

Fixing Method

Part No LED LL01CR-DFxxL06  
CREE XD16 / XHP35-HI / XPL-HI / XQD

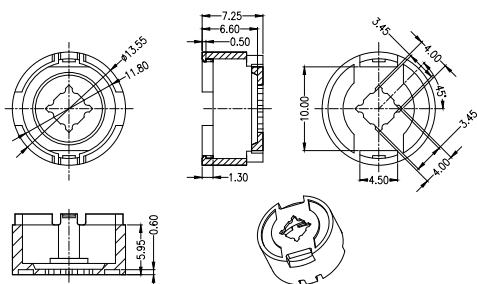
Part No LED LL01xx-BDFxxL06  
CREE XHP35-HI / XPL-HI / XQD / XQE-HI  
LUMILEDS LUXEON Z ES  
SEOUL Z8Y15 / Z8Y19



Lift lens and have its bottom aligned with the top of LED's light emitting surface.

## Holder Dimension

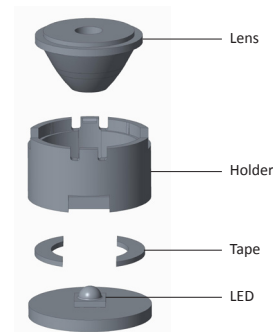
LL01CRCR10Hx



## Assembly Instruction

Fixing Method

Part No LL01CR-DFxxL06-M2-T (Lens:DF Series)  
LL01CR-CRxxL06-Mx-T (Lens:BDF Series)  
Holder LL01CRCR10H2  
Tape LL01A00XHNX

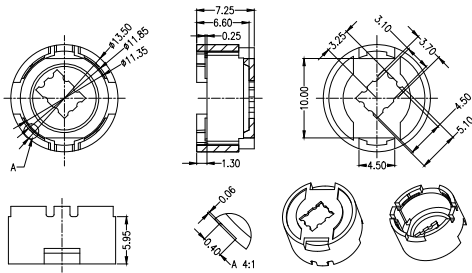


# Mechanical Specification

\*All dimensions are in millimeters.

## Holder Dimension

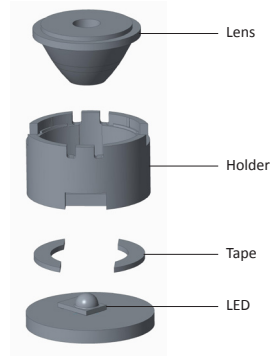
LL01LUCR10Hx



## Assembly Instruction

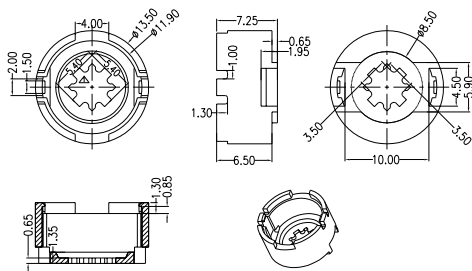
Part No LL01LU-DFxxL06-Mx-T (Lens:DF Series)  
 LL01LU-BDFxxL06-Mx-T (Lens:BDF Series)  
 Holder LL01LUCR10Hx  
 Tape LL01A00XHNX

### Fixing Method



## Holder Dimension

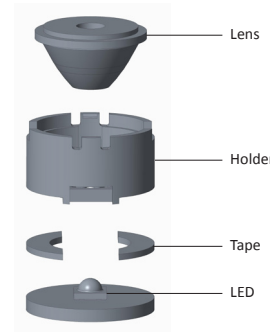
LL01CRMD25H2



## Assembly Instruction

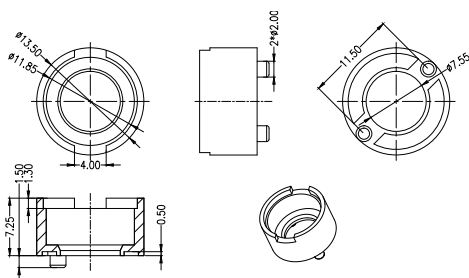
Part No LL01HS-DFxxL06-M2-T (Lens:DF Series)  
 Holder LL01CRMD25H2  
 Tape LL01A00XH VX

### Fixing Method



## Holder Dimension

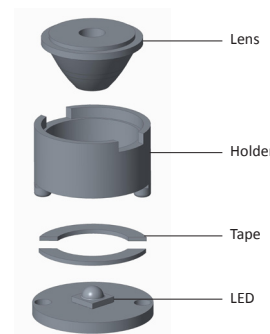
LL01CRQK25Hx



## Assembly Instruction

Part No LL01CR-QKxxL06-Mx-T (Lens:DF Series)  
 Holder LL01CRQK25Hx  
 Tape LL01A00XSMX

### Fixing Method



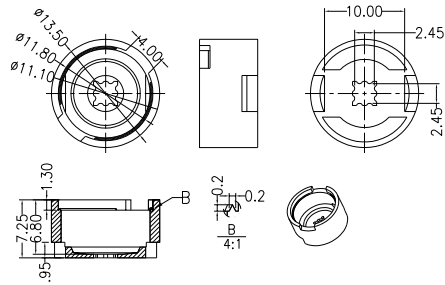
# Mechanical Specification

\*All dimensions are in millimeters.

## Holder Dimension



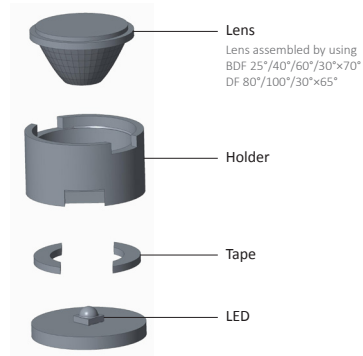
LL01CROR25Hx



## Assembly Instruction

Part No LL01CR-BDFxL06-Mx-T  
Holder LL01CROR25Hx  
Tape LL01A00XHNX

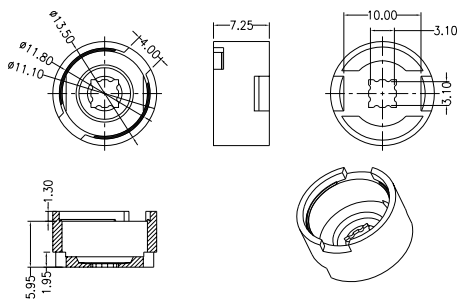
## Fixing Method



## Holder Dimension



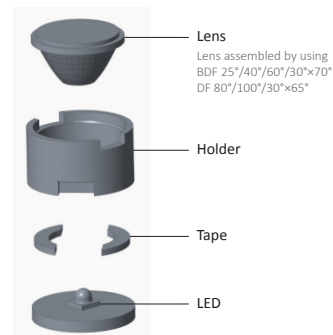
LL01OSRD40Hx



## Assembly Instruction

Part No LL01OS-BDFxL06-Mx-T  
Holder LL01OSRD40Hx  
Tape LL01A00XHNX

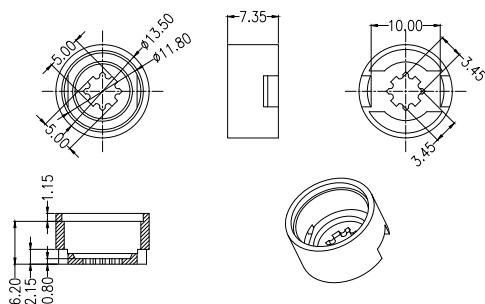
## Fixing Method



## Holder Dimension



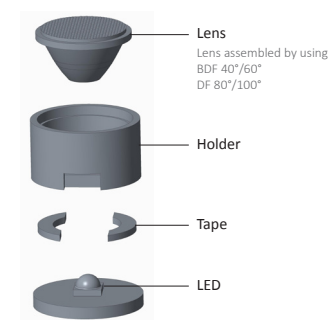
LL01CRRP25Hx



## Assembly Instruction

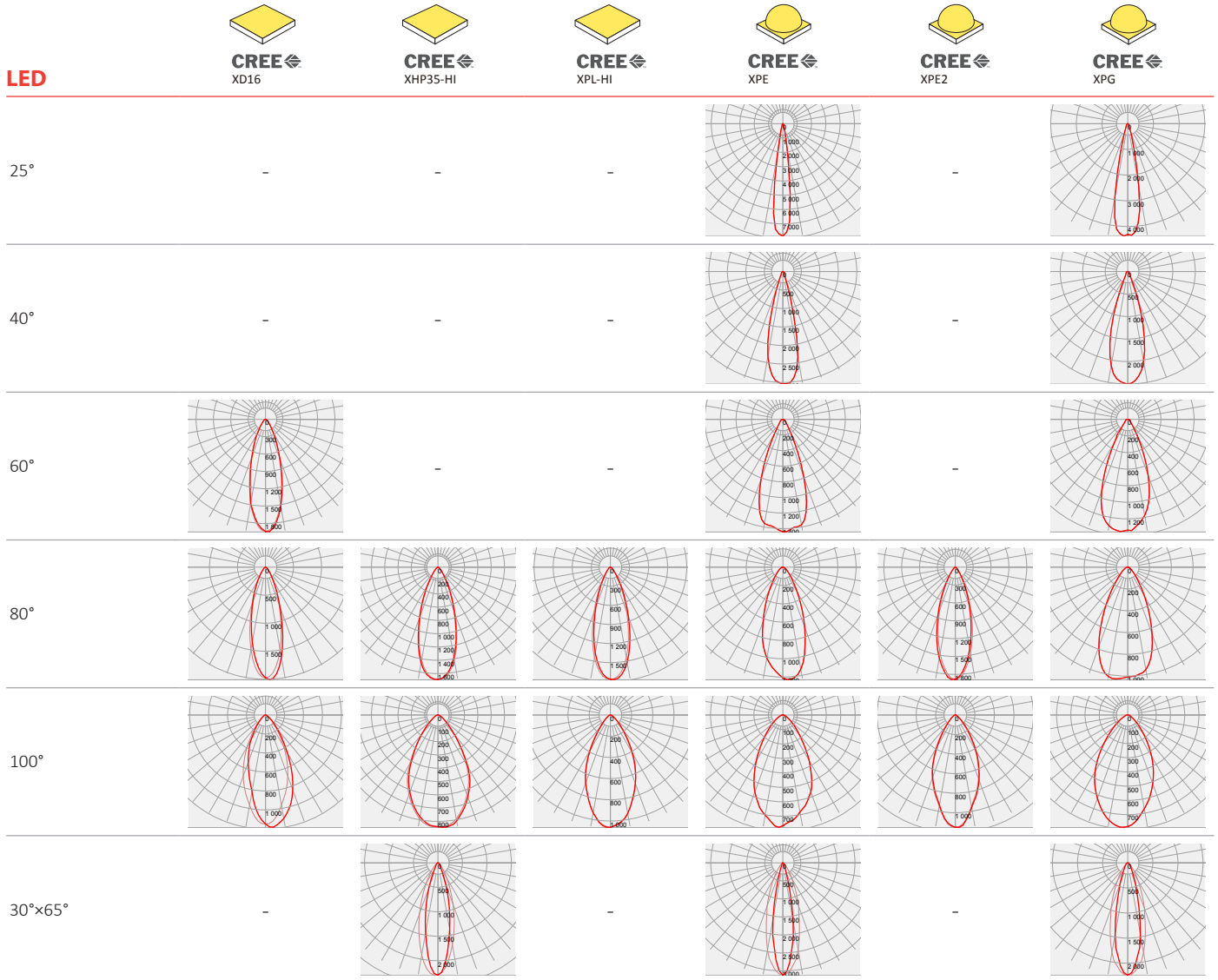
Part No LL01RP-BDFxL06-Mx-T  
Holder LL01CRRP25Hx  
Tape LL01A00XHNX

## Fixing Method



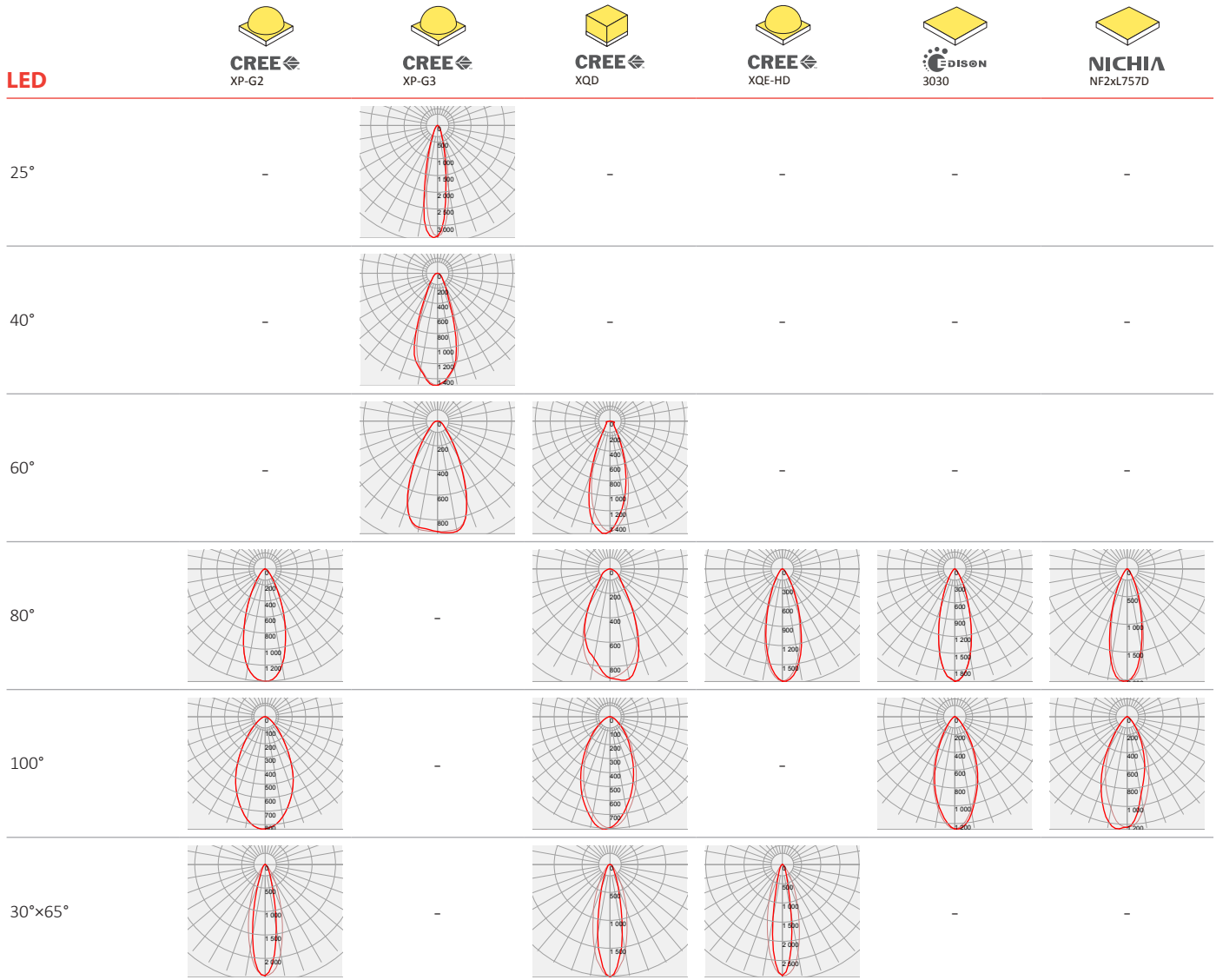
# Photometric Distribution

DF Series



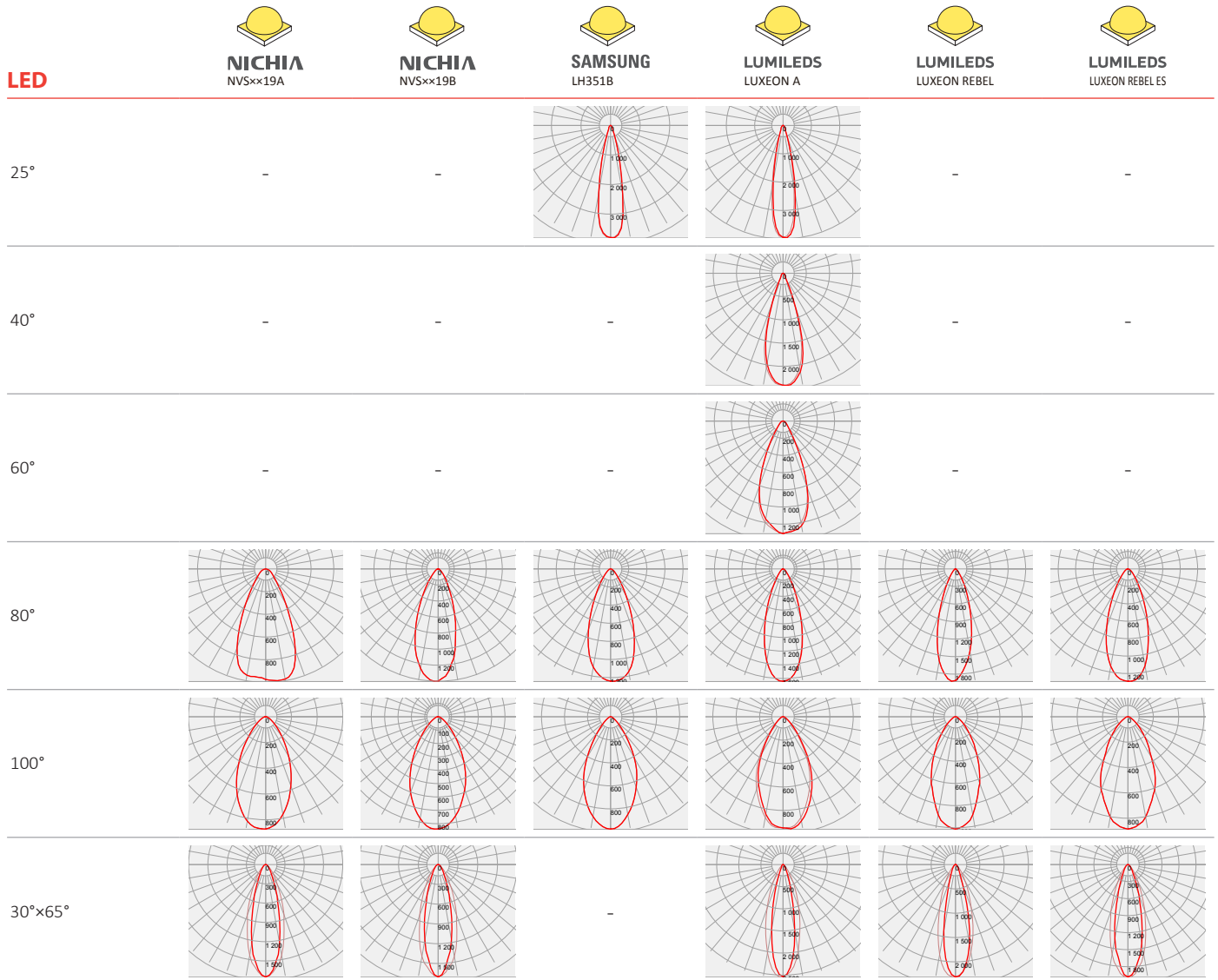
# Photometric Distribution

DF Series



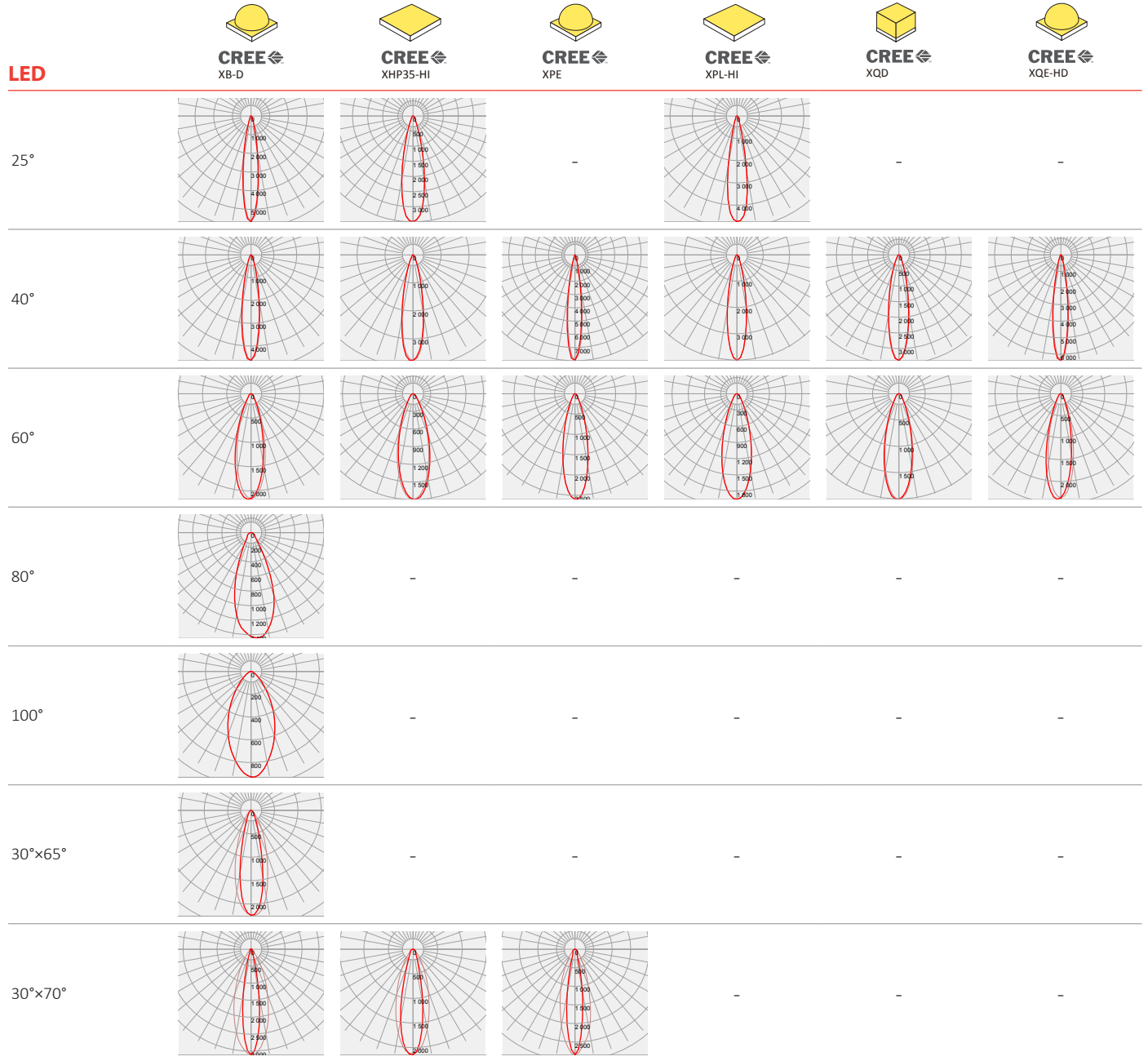
# Photometric Distribution

DF Series



# Photometric Distribution

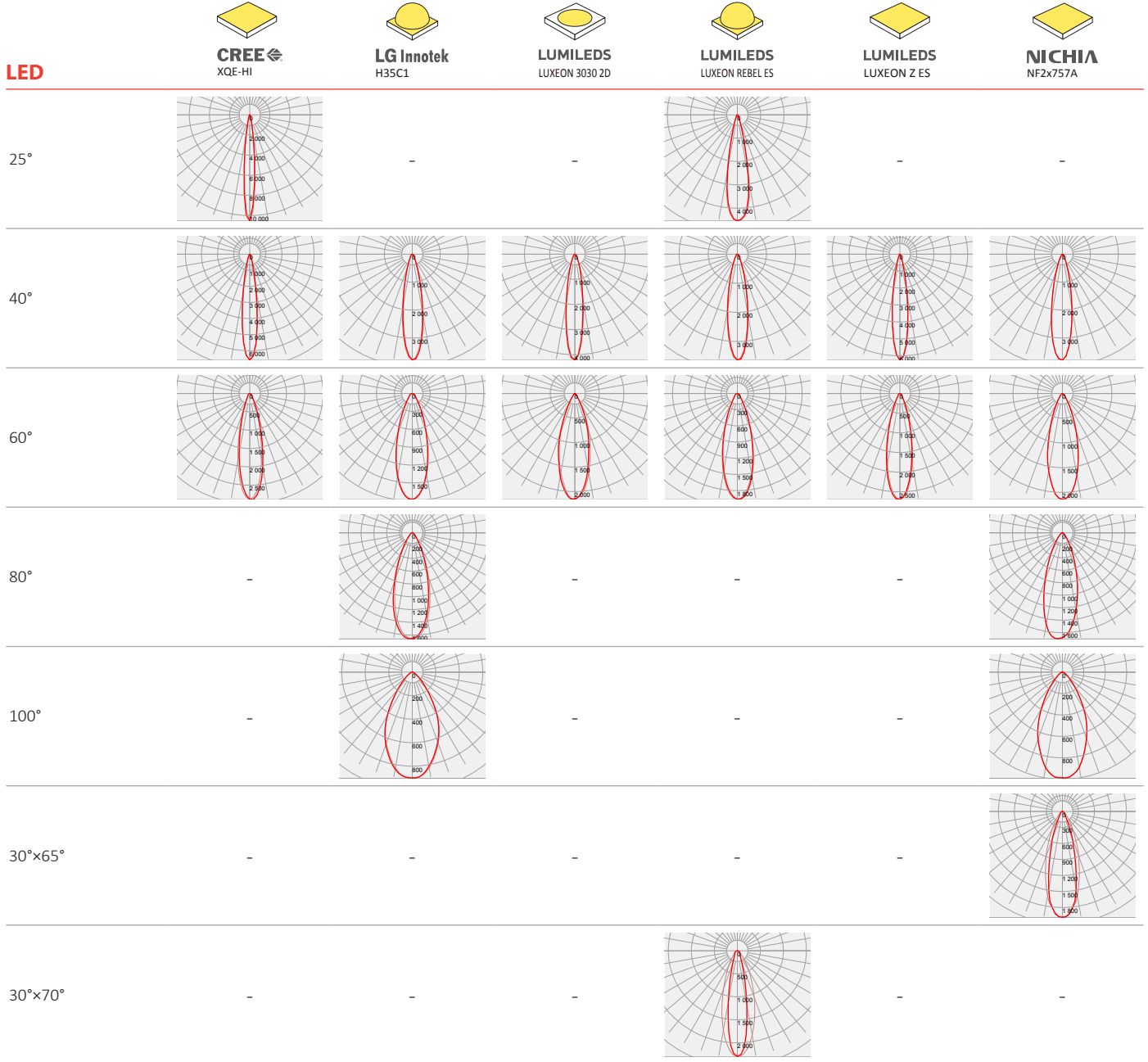
BDF Series





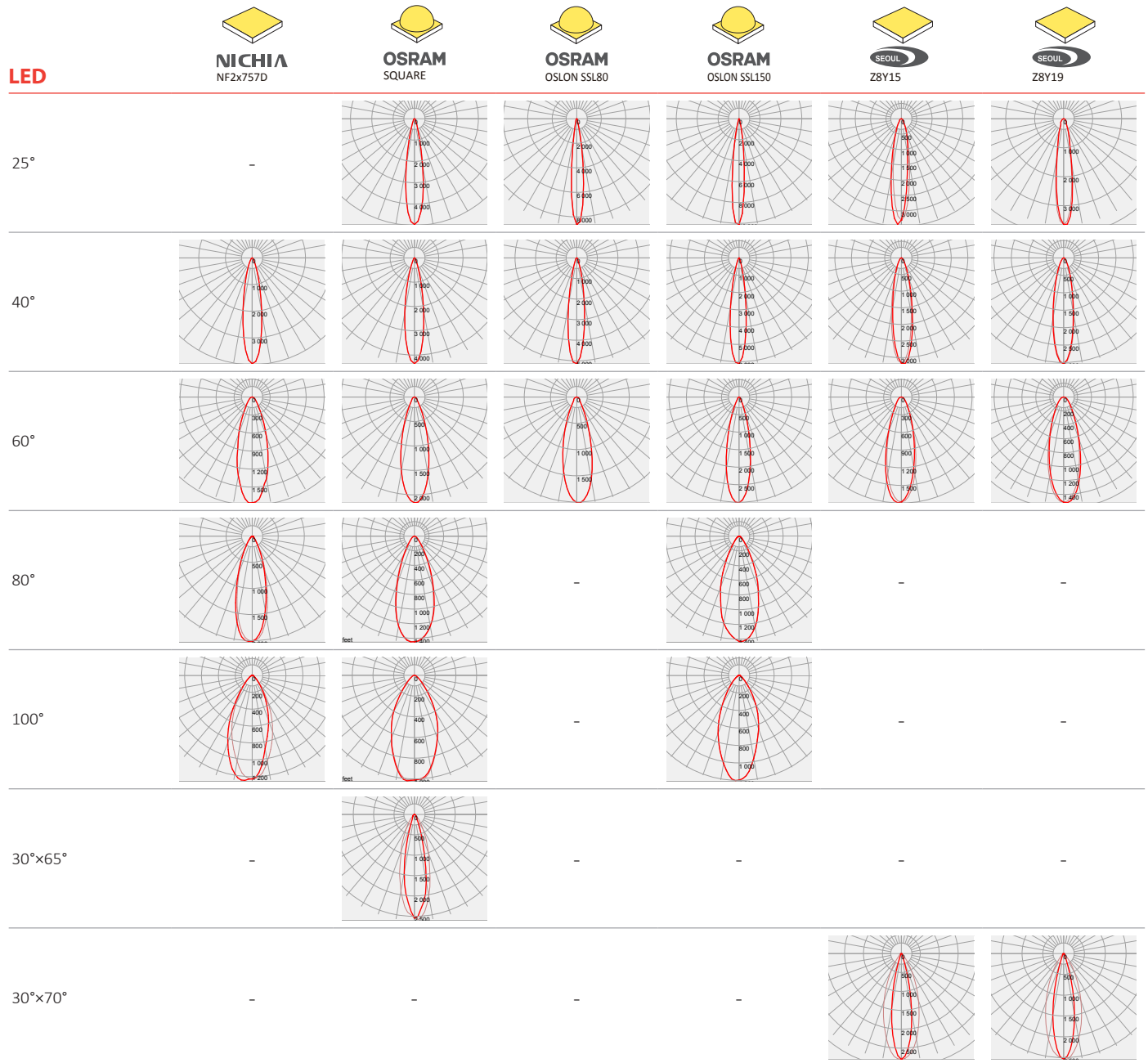
# Photometric Distribution

BDF Series



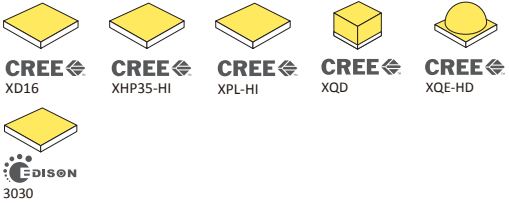
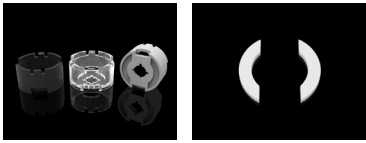
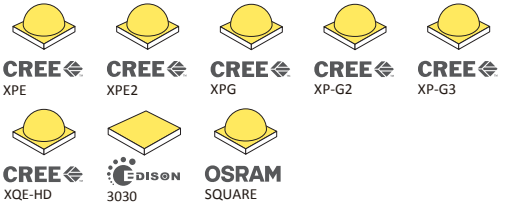




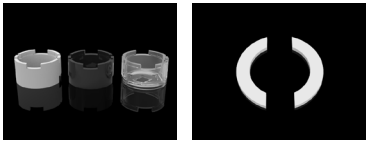

# Photometric Distribution

BDF Series



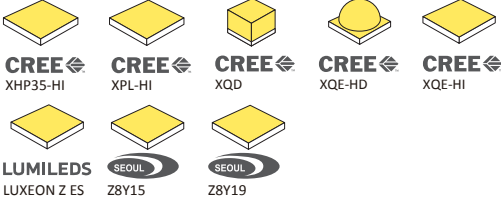
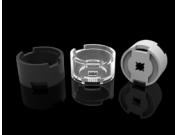
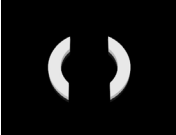


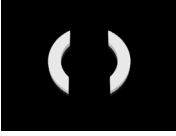


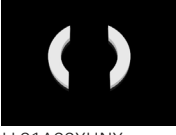





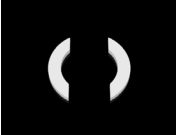

# Details by LED

DF Series







Part No	Holder	Tape	LED Package Size	LED
LL01CR-DFxxL06	-	-	1616 / 3030 / 3535	
LL01CR-DFxxL06-M2-T	 <p>LLO1CRCR10Hx    LLO1A00XHNx</p>		3030 / 3535	
LL01LU-DFxxL06-Mx-T	 <p>LLO1LUCR10Hx    LLO1A00XHNx</p>		3045	
LL01HS-DFxxL06-M2-T	 <p>LLO1CRMD25H2    LLO1A00XHVx</p>		3535	
LL01CR-QKxxL06-Mx-T	 <p>LLO1CRQK25Hx    LLO1A00XSMx</p>		3535	








# Details by LED

## BDF Series








Part No	Holder	Tape	LED Package Size	LED
LL01OS-BDF25L06 LL01CR-BDFxxL06 (40°/60°/30°x70°)	-	-	1414 / 1616 / 1620 1818 / 3535	
LL01CR-BDFxxL06-Mx-T Lens assembled by using BDF 25°/40°/60°/30°x70° DF 80°/100°/30°x65°			2525	
LL01CR-CRxxL06-Mx-T Lens assembled by using BDF 25°/40°/60°/30°x70°			3535	
LL01LU-BDFxxL06-Mx-T Lens assembled by using BDF 25°/40°/60°/30°x70°			3045	
LL01OS-BDFxxL06-Mx-T Lens assembled by using BDF 25°/40°/60°/30°x70° DF 80°/100°/30°x65°			3030	
LL01RP-BDFxxL06-Mx-T Lens assembled by using BDF 40°/60° DF 80°/100°			3535	

DF Series











LED	Part No	FWHM	cd / lm	IES
 <b>CREE</b> XD16	LL01CR-DF25L06	-	-	-
	LL01CR-DF40L06	-	-	-
	LL01CR-DF60L06	32°	1.9	↓
	LL01CR-DF80L06	31°	2.0	↓
	LL01CR-DF100L06	44°	1.1	↓
 <b>CREE</b> XHP35-HI	LL01CR-DF25L06	-	-	-
	LL01CR-DF40L06	-	-	-
	LL01CR-DF60L06	-	-	-
	LL01CR-DF80L06	37°	1.6	↓
	LL01CR-DF100L06	60°	0.8	↓
 <b>CREE</b> XPL-HI	LL01CR-DF25L06	-	-	-
	LL01CR-DF40L06	-	-	-
	LL01CR-DF60L06	-	-	-
	LL01CR-DF80L06	35°	1.7	↓
	LL01CR-DF100L06	51°	1.0	↓
 <b>CREE</b> XPE	LL01CR-DF25L06-M2-T	15°	7.8	↓
	LL01CR-DF40L06-M2-T	26°	3.0	↓
	LL01CR-DF60L06-M2-T	42°	1.4	↓
	LL01CR-DF80L06-M2-T	42°	1.2	↓
	LL01CR-DF100L06-M2-T	57°	0.7	↓
	LL01CR-DF3065L06-M2-T	20°x33°	3.1	↓
	LL01CR-QK25L06-M2-T	15°	7.8	↓
	LL01CR-QK40L06-M2-T	26°	3.0	↓
	LL01CR-QK60L06-M2-T	42°	1.4	↓
	LL01CR-QK80L06-M2-T	42°	1.2	↓
	LL01CR-QK100L06-M2-T	57°	0.7	↓
	LL01CR-QK3065L06-M2-T	20°x33°	3.1	↓
	LL01HS-DF25L06-M2-T	15°	7.8	↓
	LL01HS-DF40L06-M2-T	-	-	-
	LL01HS-DF60L06-M2-T	-	-	-
LL01HS-DF80L06-M2-T	42°	1.2	↓	
LL01HS-DF100L06-M2-T	57°	0.7	↓	
LL01HS-DF3065L06-M2-T	20°x33°	3.1	↓	
 <b>CREE</b> XPE2	LL01CR-DF25L06-M2-T	-	-	-
	LL01CR-DF40L06-M2-T	-	-	-
	LL01CR-DF60L06-M2-T	-	-	-
	LL01CR-DF80L06-M2-T	34°	1.8	↓
	LL01CR-DF100L06-M2-T	48°	1.1	↓
 <b>CREE</b> XPG	LL01CR-DF25L06-M2-T	22°	4.3	↓
	LL01CR-DF40L06-M2-T	32°	2.4	↓
	LL01CR-DF60L06-M2-T	44°	1.3	↓
	LL01CR-DF80L06-M2-T	50°	1.0	↓
	LL01CR-DF100L06-M2-T	59°	0.7	↓
LL01CR-DF3065L06-M2-T	24°x35°	2.2	↓	

LED	Part No	FWHM	cd / lm	IES
 <b>CREE</b> XP-G2	LL01CR-DF25L06-M2-T	-	-	-
	LL01CR-DF40L06-M2-T	-	-	-
	LL01CR-DF60L06-M2-T	-	-	-
	LL01CR-DF80L06-M2-T	41°	1.4	↓
	LL01CR-DF100L06-M2-T	58°	0.8	↓
 <b>CREE</b> XP-G3	LL01CR-DF3065L06-M2-T	24°x34°	2.3	↓
	LL01CR-DF25L06-M2-T	21°	3.3	↓
	LL01CR-DF40L06-M2-T	38°	1.4	↓
	LL01CR-DF60L06-M2-T	53°	0.9	↓
	LL01CR-DF80L06-M2-T	-	-	-
 <b>CREE</b> XQD	LL01CR-DF100L06-M2-T	-	-	-
	LL01CR-DF3065L06-M2-T	-	-	-
	LL01CR-DF25L06	-	-	-
	LL01CR-DF40L06	-	-	-
	LL01CR-DF60L06	36°	1.5	↓
 <b>CREE</b> XQE-HD	LL01CR-DF80L06	52°	0.9	↓
	LL01CR-DF100L06	54°	0.8	↓
	LL01CR-DF3065L06	24°x34°	2.0	↓
	LL01CR-DF25L06	-	-	-
	LL01CR-DF40L06	-	-	-
	LL01CR-DF60L06	-	-	-
	LL01CR-DF80L06	35°	1.7	↓
	LL01CR-DF100L06	-	-	-
	LL01CR-DF3065L06	19°x32°	2.9	↓
	LL01CR-DF25L06-M2-T	-	-	-
	LL01CR-DF40L06-M2-T	-	-	-
	LL01CR-DF60L06-M2-T	-	-	-
	LL01CR-DF80L06-M2-T	35°	1.7	↓
	LL01CR-DF100L06-M2-T	-	-	-
	LL01CR-DF3065L06-M2-T	19°x32°	2.9	↓
 <b>EDISON</b> 3030	LL01CR-DF25L06	-	-	-
	LL01CR-DF40L06	-	-	-
	LL01CR-DF60L06	-	-	-
	LL01CR-DF80L06	32°	1.9	↓
	LL01CR-DF100L06	44°	1.2	↓
	LL01CR-DF3065L06	-	-	-
	LL01CR-DF25L06-M2-T	-	-	-
	LL01CR-DF40L06-M2-T	-	-	-
	LL01CR-DF60L06-M2-T	-	-	-
	LL01CR-DF80L06-M2-T	32°	1.9	↓
 <b>NICHIA</b> NF2xL757D	LL01CR-DF100L06-M2-T	44°	1.2	↓
	LL01CR-DF3065L06-M2-T	-	-	-
	LL01CR-DF25L06-M2-T	-	-	-
	LL01CR-DF40L06-M2-T	-	-	-
	LL01CR-DF60L06-M2-T	-	-	-
 <b>NICHIA</b> NF2xL757D	LL01HS-DF25L06-M2-T	-	-	-
	LL01HS-DF40L06-M2-T	-	-	-
	LL01HS-DF60L06-M2-T	-	-	-
	LL01HS-DF80L06-M2-T	32°	2.0	↓
	LL01HS-DF100L06-M2-T	43°	1.2	↓
LL01HS-DF3065L06-M2-T	-	-	-	









DF Series

LED	Part No	FWHM	cd / lm	IES
 <b>NICHIA</b> NVSxx19A	LL01HS-DF25L06-M2-T	-	-	-
	LL01HS-DF40L06-M2-T	-	-	-
	LL01HS-DF60L06-M2-T	-	-	-
	LL01HS-DF80L06-M2-T	51°	0.9	↓
	LL01HS-DF100L06-M2-T	55°	0.8	↓
 <b>NICHIA</b> NVSxx19B	LL01HS-DF25L06-M2-T	-	-	-
	LL01HS-DF40L06-M2-T	-	-	-
	LL01HS-DF60L06-M2-T	-	-	-
	LL01HS-DF80L06-M2-T	40°	1.4	↓
	LL01HS-DF100L06-M2-T	56°	0.8	↓
 <b>OSRAM</b> SQUARE	LL01CR-DF25L06-M2-T	-	-	-
	LL01CR-DF40L06-M2-T	-	-	-
	LL01CR-DF60L06-M2-T	-	-	-
	LL01CR-DF80L06-M2-T	41°	1.3	↓
	LL01CR-DF100L06-M2-T	59°	0.8	↓
 <b>SAMSUNG</b> LH351B	LL01HS-DF25L06-M2-T	22	3.8	↓
	LL01HS-DF40L06-M2-T	-	-	-
	LL01HS-DF60L06-M2-T	-	-	-
	LL01HS-DF80L06-M2-T	45°	1.2	↓
	LL01HS-DF100L06-M2-T	54°	0.9	↓
 <b>LUMILEDS</b> LUXEON A	LL01LU-DF25L06-M2-T	21°	3.9	↓
	LL01LU-DF40L06-M2-T	34°	2.4	↓
	LL01LU-DF60L06-M2-T	45°	1.3	↓
	LL01LU-DF80L06-M2-T	37°	1.6	↓
	LL01LU-DF100L06-M2-T	54°	0.9	↓
 <b>LUMILEDS</b> LUXEON REBEL	LL01LU-DF25L06-M2-T	-	-	-
	LL01LU-DF40L06-M2-T	-	-	-
	LL01LU-DF60L06-M2-T	-	-	-
	LL01LU-DF80L06-M2-T	34°	1.9	↓
	LL01LU-DF100L06-M2-T	49°	1.0	↓
 <b>LUMILEDS</b> LUXEON REBEL ES	LL01LU-DF3065L06-M2-T	25°x35°	2.3	↓
	LL01LU-DF25L06-M2-T	-	-	-
	LL01LU-DF40L06-M2-T	-	-	-
	LL01LU-DF60L06-M2-T	-	-	-
	LL01LU-DF80L06-M2-T	41°	1.2	↓
	LL01LU-DF100L06-M2-T	54°	0.8	↓
	LL01LU-DF3065L06-M2-T	27°x35°	1.9	↓

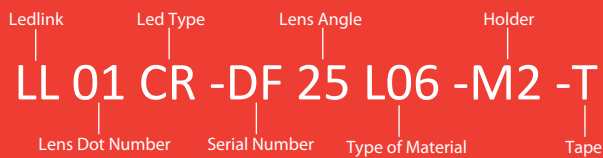
BDF Series

LED	Part No	FWHM	cd / lm	IES
 <b>CREE</b> XB-D	LL01CR-BDF25L06-M2-T	16°	5.6	↓
	LL01CR-BDF40L06-M2-T	18°	4.6	↓
	LL01CR-BDF60L06-M2-T	30°	2.1	↓
	LL01CR-BDF80L06-M2-T	40°	1.4	↓
	LL01CR-BDF100L06-M2-T	52°	0.9	↓
 <b>CREE</b> XHP35-HI	LL01CR-BDF3065L06-M2-T	24°x35°	2.2	↓
	LL01CR-BDF3070L06-M2-T	18°x37°	3.1	↓
	LL01OS-BDF25L06	23°	3.4	↓
	LL01CR-BDF40L06	22°	3.7	↓
	LL01CR-BDF60L06	33°	1.7	↓
 <b>CREE</b> XPE	LL01CR-BDF3070L06	23°x36°	2.1	↓
	LL01CR-CR25L06-M2-T	-	-	-
	LL01CR-CR40L06-M2-T	15°	7.9	↓
	LL01CR-CR60L06-M2-T	27°	2.5	↓
	LL01CR-CR3070L06-M2-T	17°x32°	2.8	↓
 <b>CREE</b> XPL-HI	LL01OS-BDF25L06	20°	4.7	↓
	LL01CR-BDF40L06	20°	4.0	↓
	LL01CR-BDF60L06	31°	1.9	↓
	LL01CR-BDF3070L06	-	-	-
	LL01OS-BDF25L06	-	-	-
 <b>CREE</b> XQD	LL01CR-BDF40L06	21°	3.3	↓
	LL01CR-BDF60L06	30°	2.0	↓
	LL01CR-BDF3070L06	-	-	-
	LL01OS-BDF25L06	-	-	-
	LL01CR-BDF40L06	16°	6.3	↓
 <b>CREE</b> XQE-HD	LL01CR-BDF60L06	27°	2.4	↓
	LL01CR-BDF3070L06	-	-	-
	LL01OS-BDF25L06	11°	10.5	↓
	LL01CR-BDF40L06	15°	6.5	↓
	LL01CR-BDF60L06	25°	2.8	↓
 <b>CREE</b> XQE-HI	LL01CR-BDF3070L06	-	-	-
	LL01RP-BDF40L06-M2-T	21°	3.7	↓
	LL01RP-BDF60L06-M2-T	33°	1.7	↓
	LL01RP-BDF80L06-M2-T	37°	1.6	↓
	LL01RP-BDF100L06-M2-T	57°	0.9	↓
 <b>LG Innotek</b> H35C1	LL01OS-BDF25L06-M2-T	-	-	-
	LL01OS-BDF40L06-M2-T	18°	4.2	↓
	LL01OS-BDF60L06-M2-T	32°	2.1	↓
	LL01OS-BDF80L06-M2-T	-	-	-
	LL01OS-BDF100L06-M2-T	-	-	-
 <b>LUMILEDS</b> LUXEON 3030 2D	LL01OS-BDF3065L06-M2-T	-	-	-
	LL01OS-BDF3070L06-M2-T	-	-	-
	LL01LU-BDF25L06-M2-T	21°	4.5	↓
	LL01LU-BDF40L06-M2-T	21°	3.6	↓
	LL01LU-BDF60L06-M2-T	32°	1.9	↓
 <b>LUMILEDS</b> LUXEON REBEL ES	LL01LU-BDF3070L06-M2-T	20°x35°	2.3	↓

BDF Series

LED	Part No	FWHM	cd / lm	IES
 <b>LUMILEDS</b> LUXEON Z ES	LL01OS-BDF25L06	-	-	-
	LL01CR-BDF40L06	16°	6.2	↓
	LL01CR-BDF60L06	27°	2.6	↓
	LL01CR-BDF3070L06	-	-	-
 <b>NICHIA</b> NF2x757A	LL01OS-BDF25L06-M2-T	-	-	-
	LL01OS-BDF40L06-M2-T	21°	3.7	↓
	LL01OS-BDF60L06-M2-T	32°	2.1	↓
	LL01OS-BDF80L06-M2-T	35°	1.6	↓
	LL01OS-BDF100L06-M2-T	52°	0.9	↓
	LL01OS-BDF3065L06-M2-T	28°x36°	1.9	↓
	LL01OS-BDF3070L06-M2-T	-	-	-
 <b>NICHIA</b> NF2x757D	LL01OS-BDF25L06-M2-T	-	-	-
	LL01OS-BDF40L06-M2-T	20°	3.9	↓
	LL01OS-BDF60L06-M2-T	32°	1.7	↓
	LL01OS-BDF80L06-M2-T	32°	2.0	↓
	LL01OS-BDF100L06-M2-T	43°	1.2	↓
	LL01OS-BDF3065L06-M2-T	-	-	-
 <b>OSRAM</b> SQUARE	LL01OS-BDF25L06-M2-T	18°	4.9	↓
	LL01OS-BDF40L06-M2-T	20°	4.3	↓
	LL01OS-BDF60L06-M2-T	30°	2.1	↓
	LL01OS-BDF80L06-M2-T	40°	1.4	↓
	LL01OS-BDF100L06-M2-T	51°	1.0	↓
	LL01OS-BDF3065L06-M2-T	23°x32°	2.5	↓
	LL01OS-BDF3070L06-M2-T	-	-	-
 <b>OSRAM</b> OSOLON SSL80	LL01OS-BDF25L06-M2-T	13°	8.6	↓
	LL01OS-BDF40L06-M2-T	17°	5.1	↓
	LL01OS-BDF60L06-M2-T	31°	2.0	↓
	LL01OS-BDF80L06-M2-T	-	-	-
	LL01OS-BDF100L06-M2-T	-	-	-
	LL01OS-BDF3065L06-M2-T	-	-	-
 <b>OSRAM</b> OSOLON SSL150	LL01OS-BDF25L06-M2-T	12°	10.1	↓
	LL01OS-BDF40L06-M2-T	17°	6.1	↓
	LL01OS-BDF60L06-M2-T	25°	3.0	↓
	LL01OS-BDF80L06-M2-T	41°	1.4	↓
	LL01OS-BDF100L06-M2-T	44°	1.2	↓
	LL01OS-BDF3065L06-M2-T	-	-	-
	LL01OS-BDF3070L06-M2-T	-	-	-
 <b>SEOUL</b> Z8Y15	LL01OS-BDF25L06	17°	3.4	↓
	LL01CR-BDF40L06	21°	3.1	↓
	LL01CR-BDF60L06	30°	1.7	↓
	LL01CR-BDF3070L06	21°x38°	2.7	↓
 <b>SEOUL</b> Z8Y19	LL01OS-BDF25L06	17°	3.6	↓
	LL01CR-BDF40L06	22°	3.0	↓
	LL01CR-BDF60L06	33°	1.5	↓
	LL01CR-BDF3070L06	23°x38°	2.5	↓

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