

# HIGH POWER LED

High Power LED  
Part No. System

EP 5 01 WY L 064 W HR3  
X1 X2 X3 X4 X5 X6 X7 X8

HIGH POWER LED

X1		X2		X3		X4	
LED item		Substrate		Power		Emitted Color	
Code	Type	Code	Type	Code	Type	Code	Type
EP	High Power	1	Aluminum	01	0.5~1W	B	InGaN 465nm Blue
		2	Silicon	02	1~2W	G	InGaN 525nm Ultra Green
		3	Ferrum	03	2~3W	Y	AllInGaP 590nm Super Yellow
		4	Ceramic	04	3~4W	A	AllInGaP 606nm Super Amber
		5	Copper	05	4~5W	R	AllInGaP 630nm Super Red
				...	...	W1	InGaN Cool White (5,300~6,800K)
						W5	InGaN Neutral White (4,800~5,600K)
						W2	InGaN Neutral White (3,800~4,600K)
						W4	InGaN Neutral White (3,300~4,300K)
						WY	InGaN Warm White (2,800~3,300K)
						IRA	AlGaAs 745nm Infrared
						IR4	AlGaAs 850nm Infrared
						IR1	AlGaAs 940nm Infrared

X5		X6		X7		X8	
View Angle		Series Number		Housing Color		Ra	
Code	Type			Code	Type	Code	Type
2	2x5=10°			W	White	HR	≥80
3	3x5=15°			B	Black	HR2	≥85
6	6x5=30°					HR3	≥90
C	Cx5=60°						
K	Kx5=100°						
L	Lx5=130°						
M	Mx5=160°						

Chip On Board  
Part No. System

$\frac{C}{X1}$   $\frac{R}{X2}$   $\frac{07}{X3}$   $\frac{C}{X4}$  -  $\frac{P1}{X5}$   $\frac{C}{X6}$   $\frac{54}{X7}$  -  $\frac{E}{X8}$   $\frac{C0}{X9}$   $\frac{00}{X10}$

X1		X2		X3		X4		X5	
LED item		Shape		Power		Emitted Color		Substrate	
Code	Type	Code	Type	Code	Type	Code	Type	Code	Type
C	COB	S	Square	20	20W	C	Cool White	P1	Aluminum
		R	Round	07	7W	N	Neutral White	P2	Copper
		L	Line	...	...	W	Warm White	P3	Ceramic
								P4	Others

X6		X7		X8		X9		X10	
Glue Sealing Method		Package Size(mm)		Luminous Efficacy		Ra		Specific Code	
Code	Type	Code	Type	Code	Type	Code	Type	Code	Type
C	Coating			A	60~70 lm/w	B0	60~70		
L	Lens			B	70~80 lm/w	C0	70~80		
				C	80~90 lm/w	D0	80~90		
				D	90~100 lm/w				
				E	100~110 lm/w				
				F	110~120 lm/w				

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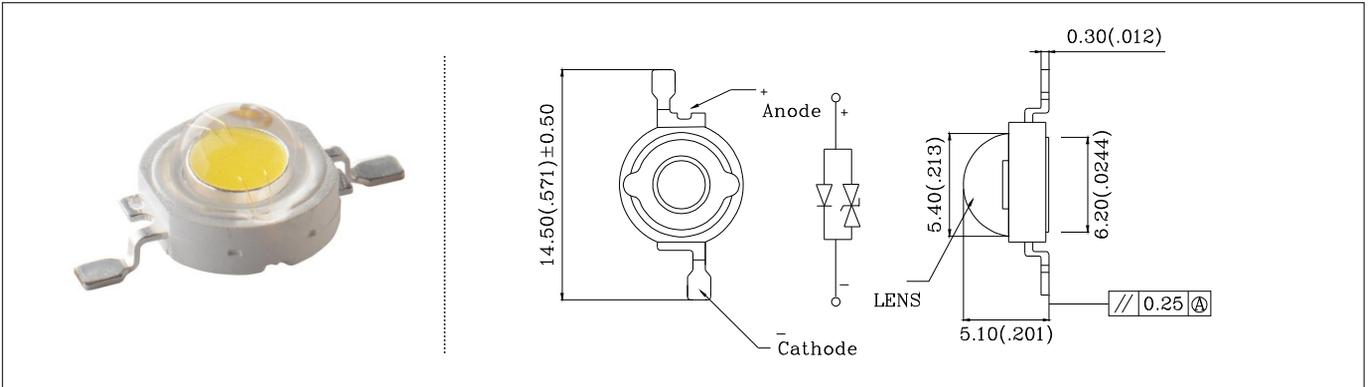
## High Power LED / Chip On Board Reliability Test

HIGH POWER LED

Classification	Test Item	Test Condition	Reference Standard
Endurance Test	Operation Life	Ta= Under Room Temperature As Per Data Sheet Maximum Rating *Test Time= 1000HRS (-24HRS,+72HRS)	MIL-STD-750D:1026 (1995) MIL-STD-883D:1005 (1991) JIS C 7021:B-1 (1982)
	High Temperature High Humidity Storage	IR-Reflow In-Board, 2 Times Ta= 65 ± 5°C, RH= 90~95% *Test Time= 1000HRS ± 2HRS	MIL-STD-202F:103B(1980) JIS C 7021:B-11(1982)
	High Temperature Storage	Ta= 105 ± 5°C *Test Time= 1000HRS (-24HRS,72HRS)	MIL-STD-883D:1008 (1991) JIS C 7021:B-10 (1982)
	Low Temperature Storage	Ta= -40 ± 5°C *Test Time=1000HRS (-24HRS,72H RS)	JEITA ED-4701200 202
Environmental Test	Temperature Cycling	-40°C ~ 25°C~100°C~25°C 30min. 5min. 30min. 5min. 100 cycles	JEITA ED-4701100 105
	Thermal Shock	IR-Reflow In-Board, 2 Times -40°C ~ 100°C 30 min. 30 min. 100 cycles	JEITA ED-4701300 307
	Solder Resistance	Tsol= 260 ± 5°C Dwell Time= 10 ± 1 sec.	JEITA ED-4701300 301
	Solder Ability	Tsol= 235 ± 5°C Immersion time 2 ± 0.5 sec. Immersion rate 25 ± 2.5 mm/sec. Coverage ≧ 95% of the dipped surface	JEITA ED-4701300 303

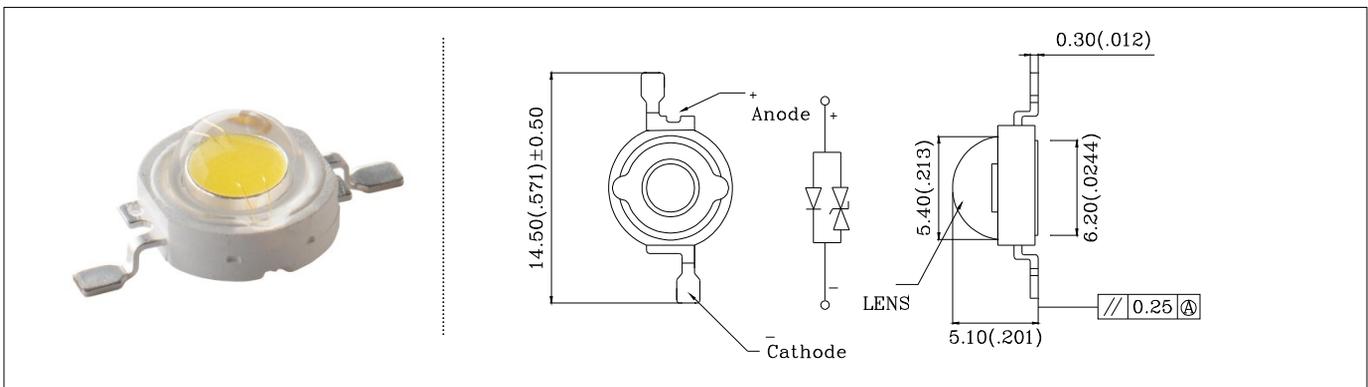
- All High Power LED/COB product dimensions are in millimeters (inches).
- Tolerance is ±0.25mm(0.01") unless otherwise specified.
- Specifications are subject to change without notice.

## EP50XXXXX -1W COOL WHITE HIGH POWER LED



Part No.	CRI	Chip		Lens Color	CCT(K)	Electro-optical characteristics			View Angle (deg.)
		Raw Material	Emitted Color			VF(V)350mA		IV(lm)350mA	
						Typ.	Max.	Typ.	
EP501W1L053WS	72	InGaN	● Cool White	Water Clear	5300-6800	3.2	3.6	130	130
EP501W1L001WS	75	InGaN	● Cool White	Water Clear	5300-6800	3.2	3.6	125	130
EP501W1C001WH	75	InGaN	● Cool White	Water Clear	5300-6800	3.2	3.6	125	60
EP501W1L059WHR	80	InGaN	● Cool White	Water Clear	5300-6800	3.2	3.6	115	130
EP501W1L056WHR2	85	InGaN	● Cool White	Water Clear	5300-6800	3.2	3.6	100	130

## EP50XXXXX -1W NEUTRAL WHITE HIGH POWER LED

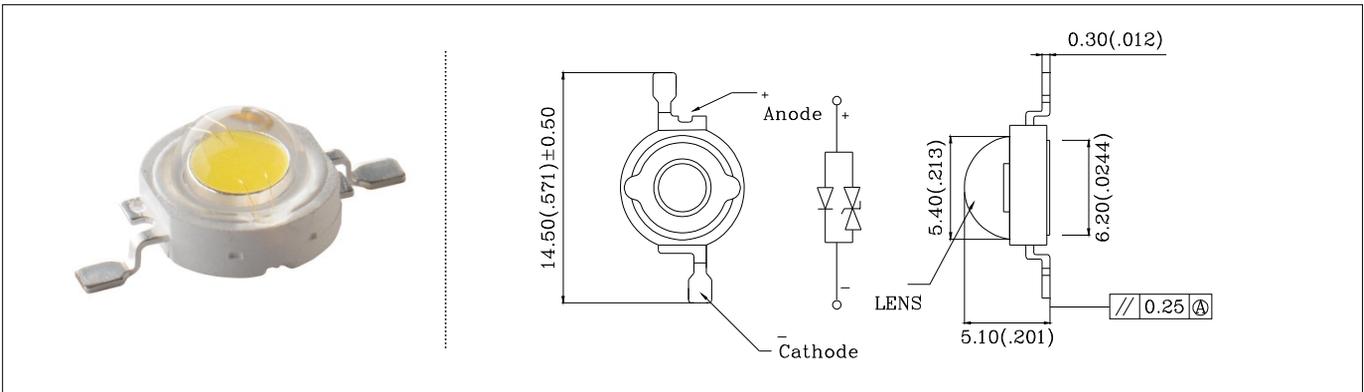


Part No.	CRI	Chip		Lens Color	CCT(K)	Electro-optical characteristics			View Angle (deg.)
		Raw Material	Emitted Color			VF(V)350mA		IV(lm)350mA	
						Typ.	Max.	Typ.	
EP501W2L001W	67	InGaN	○ Neutral White	Water Clear	3800-4600	3.2	3.6	115	130
EP501W4L040WHR	80	InGaN	○ Neutral White	Water Clear	3300-4300	3.2	3.6	110	130
EP501W5L045W	67	InGaN	○ Neutral White	Water Clear	4800-5600	3.2	3.6	110	130
EP501W2L002WL	67	InGaN	○ Neutral White	Water Clear	3800-4600	3.2	3.6	100	130

# HIGH POWER LED

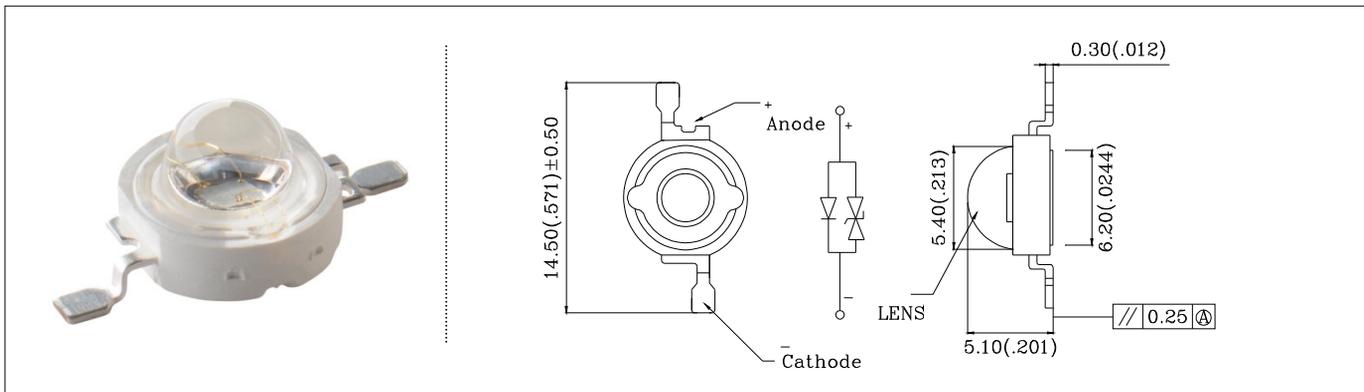
## EP50XXXXX -1W WARM WHITE HIGH POWER LED

HIGH POWER LED



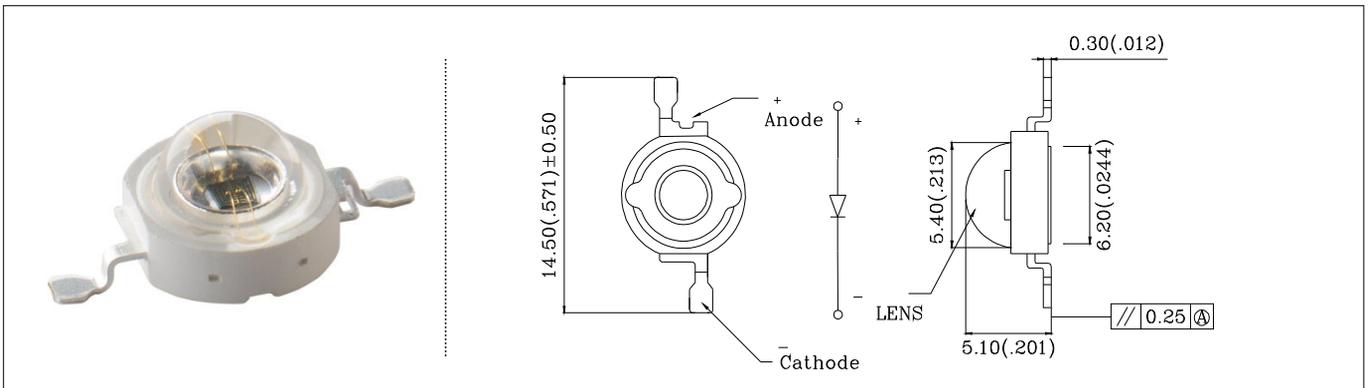
Part No.	CRI	Chip		Lens Color	CCT(K)	Electro-optical characteristics			View Angle (deg.)
		Raw Material	Emitted Color			VF(V)350mA		IV(lm)350mA	
						Typ.	Max.	Typ.	
EP501WYL002WH	62	InGaN	☀ Warm White	Water Clear	2800-3300	3.2	3.6	110	130
EP501WYL002WHR	80	InGaN	☀ Warm White	Water Clear	2800-3300	3.2	3.6	100	130
EP503WYL095WHR	80	InGaN	☀ Warm White	Water Clear	2800-3300	3.2	3.6	115	130
EP501WYL061WHR2	85	InGaN	☀ Warm White	Water Clear	2800-3300	3.2	3.6	95	130
EP501WYL064WHR3	90	InGaN	☀ Warm White	Water Clear	2800-3300	3.2	3.6	90	130

## EP50XXXXX -1W COLOUR HIGH POWER LED



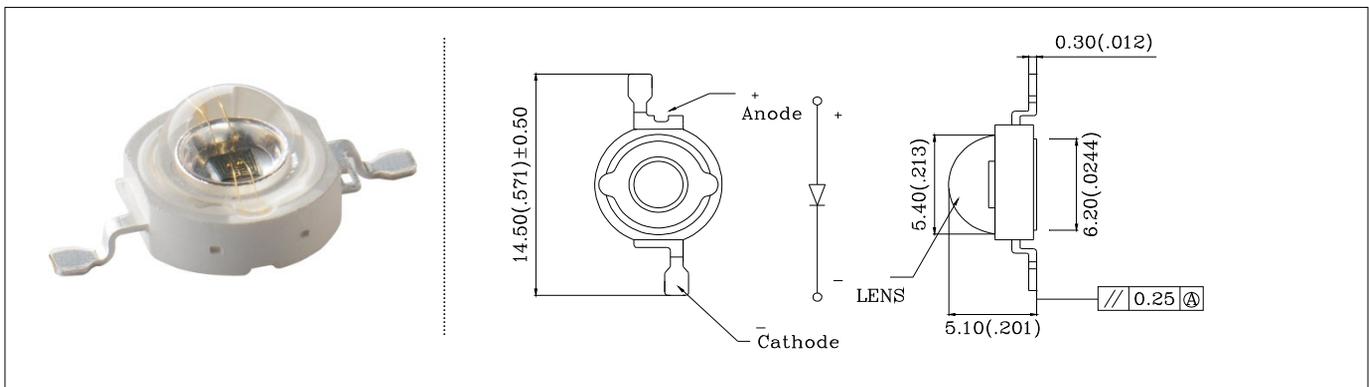
Part No.	Chip		Lens Color	Wave length λD (nm)	Electro-optical characteristics			View Angle (deg.)
	Raw Material	Emitted Color			VF(V)350mA		IV(lm)350mA	
					Typ.	Max.	Typ.	
EP501RL003W	AllnGaP	🔴 Super Red	Water Clear	630	2.0	2.5	40	130
EP501BL004W	InGaN	🔵 Blue	Water Clear	465	3.2	3.6	40	130
EP501AL005W	AllnGaP	🟠 Super Amber	Water Clear	606	2.0	2.5	40	130
EP501YL006W	AllnGaP	🟡 Super Yellow	Water Clear	590	2.0	2.5	40	130
EP501GL007W	InGaN	🟢 Ultra Green	Water Clear	525	3.2	3.6	65	130

## EP50XXXXX -2W INFRARED HIGH POWER LED



Part No.	Chip		Lens Color	Wave Length $\lambda P$ (nm)	Electro-optical characteristics			View Angle (deg.)
	Raw Material	Emitted Color			VF(V)1000mA		IE(mw/sr) 1000mA	
					Typ.	Max.	Typ.	
EP503IR4L077W	AlGaAs	Infrared	Water Clear	850	2.0	2.3	145	130
EP503IR4L017W	AlGaAs	Infrared	Water Clear	850	2.0	2.3	145	130
EP503IR4L091W	AlGaAs	Infrared	Water Clear	850	2.0	2.3	145	130
EP503IR4L076W	AlGaAs	Infrared	Water Clear	850	2.0	2.3	180	130
EP506IR4L086W	AlGaAs	Infrared	Water Clear	850	4.0	4.6	200	130

## EP50XXXXX -1W INFRARED HIGH POWER LED

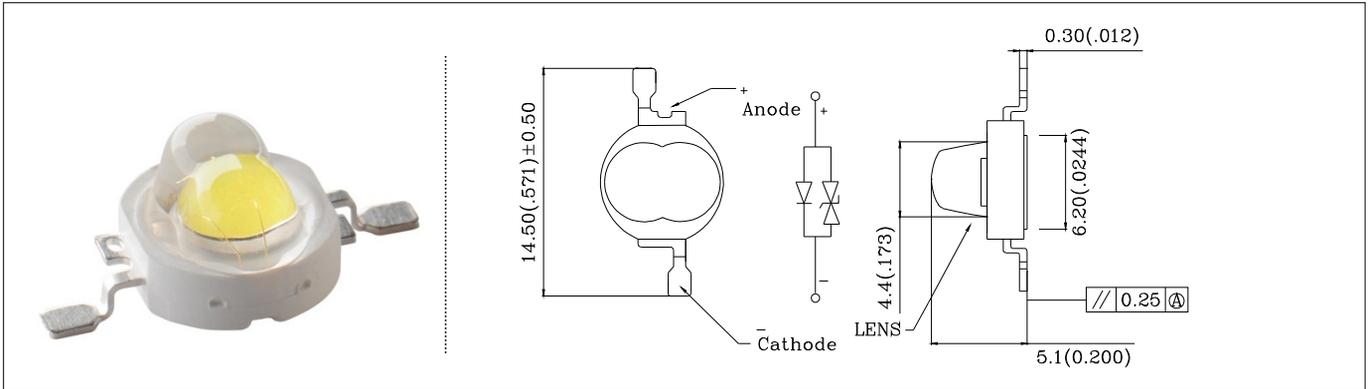


Part No.	Chip		Lens Color	Wave Length $\lambda P$ (nm)	Electro-optical characteristics			View Angle (deg.)
	Raw Material	Emitted Color			VF(V)700mA		IE(mw/sr) 700mA	
					Typ.	Max.	Typ.	
EP502IRAL039W	AlGaAs	Infrared	Water Clear	745	2.0	2.2	70	130
EP501IR1L015W	AlGaAs	Infrared	Water Clear	940	2.0	2.2	40	130

# HIGH POWER LED

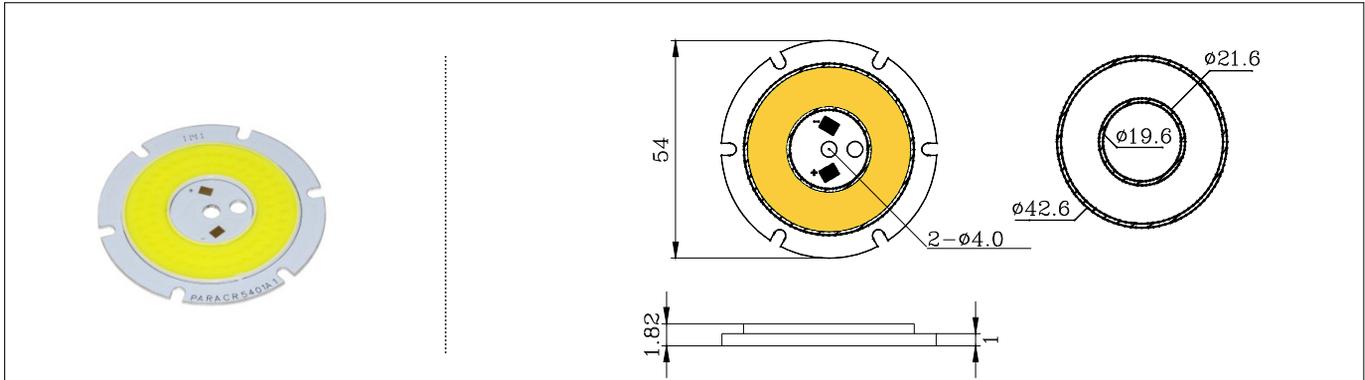
## EP50XXXXX -1W BAT-WING TYPE COOL WHITE HIGH POWER LED

HIGH POWER LED



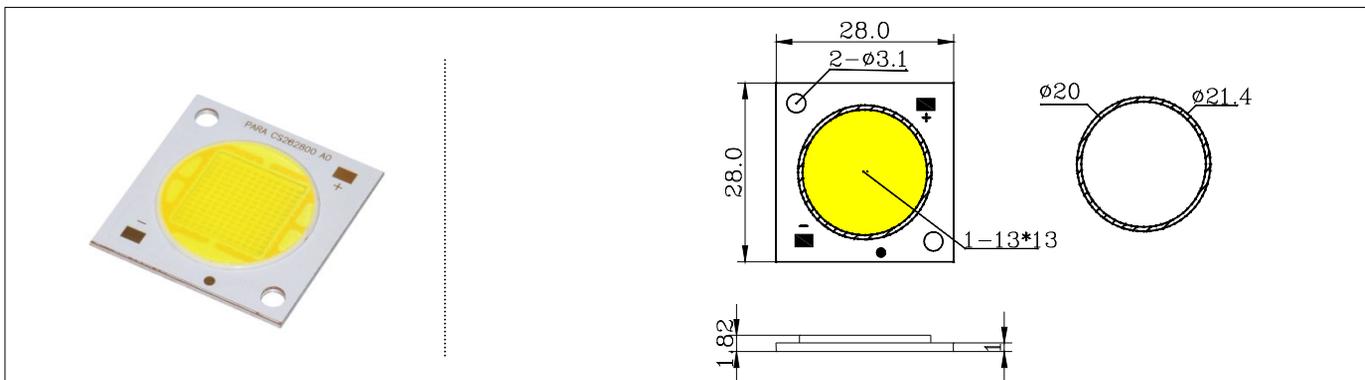
Part No.	CRI	Chip		Lens Color	CCT(K)	Electro-optical characteristics			View Angle (deg.)
		Raw Material	Emitted Color			VF(V)350mA		IV(lm)350mA	
						Typ.	Max.	Typ.	
EP501W1BW071W	70	InGaN	Cool White	Water Clear	5300-6800	3.2	3.6	115	130

## CR07X-P1C54-XXXX -6.3W CHIP ON BOARD



Part No.	CRI	Chip		CCT(K)	Electro-optical characteristics			Power (W)	View Angle (deg.)
		Raw Material	Emitted Color		VF(V)150mA		IV(lm)150mA		
					Typ.	Max.	Typ.		
CR07C-P1C54-EC000	70	InGaN	Cool White	6000	42	47	650	6.3	130
CR07W-P1C54-CC000	74	InGaN	Warm White	3000	42	47	620	6.3	130
CR07W-P1C54-CD000	80	InGaN	Warm White	3000	42	47	520	6.3	130

## CSXXC-P1C28-XXXX -20/26/40W CHIP ON BOARD



Part No.	CRI	Chip		CCT(K)	Electro-optical characteristics			Power (W)	View Angle (deg.)
		Raw Material	Emitted Color		VF(V)		IV(lm)		
					Typ.	Max.	Typ.		
CS20C-P1C28-DB000	65	InGaN	Cool White	5000	36	39	1920	20	130
CS30C-P1C28-CC000	65	InGaN	Cool White	5000	36	39	2500	26	130
CS40C-P1C28-CB000	65	InGaN	Cool White	5000	36	39	3300	40	130