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DATA SHEET

PART NO. : CR07W-P1C54-CD000

REV : A/0

CUSTOMER'S APPROVAL : _____

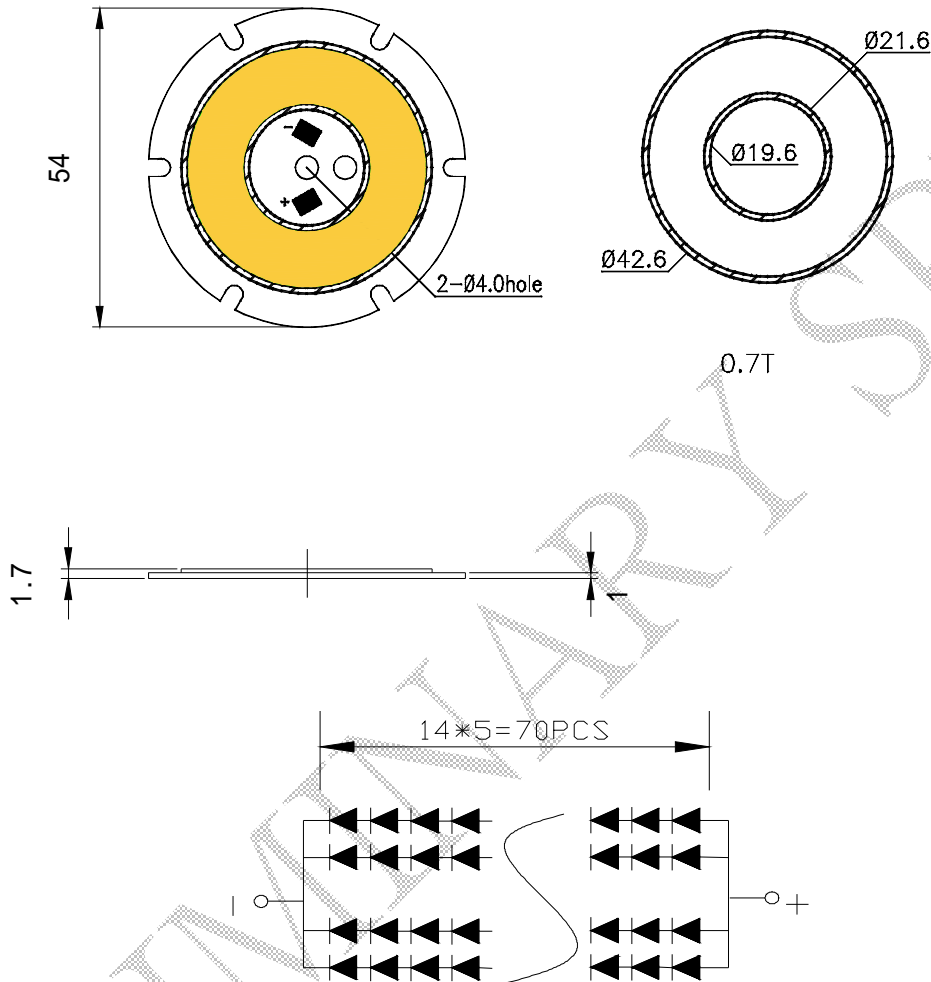
DCC : _____

DRAWING NO. : DS-81-11-000X

DATE : 2011-09-06

Page : 1

●Package Dimension



Note:

1. All dimensions are in millimeters.
2. Tolerance is $\pm 0.2\text{mm}$ (.010") unless otherwise noted

●Features

1. Uniform high quality illumination
2. Streamlined thermal path
3. Compact high flux density light source
4. Low voltage DC operated.
5. Instant light
6. RoHS Compliant.
7. The led can withstand the max static level when assembling or operation (HBM)



COB LED

CR07W-P1C54-CD000

REV:A/0

●Chip Material

1. Dice Material : InGaN
2. Light Color : White

●Absolute Maximum Rating(Ta=25°C)

Symbol	Parameter	Rating	Unit
IF	DC Forward Current	150	mA
Tj	LED Junction Temperature(at IF=150mA)	120	°C
*Topr	Operating Temperature	-30 ~ +100	°C
*Tstg	Storage Temperature	-40 ~ +100	°C
ESD	ESD Sensitivity (Human Body Model)	2000	V

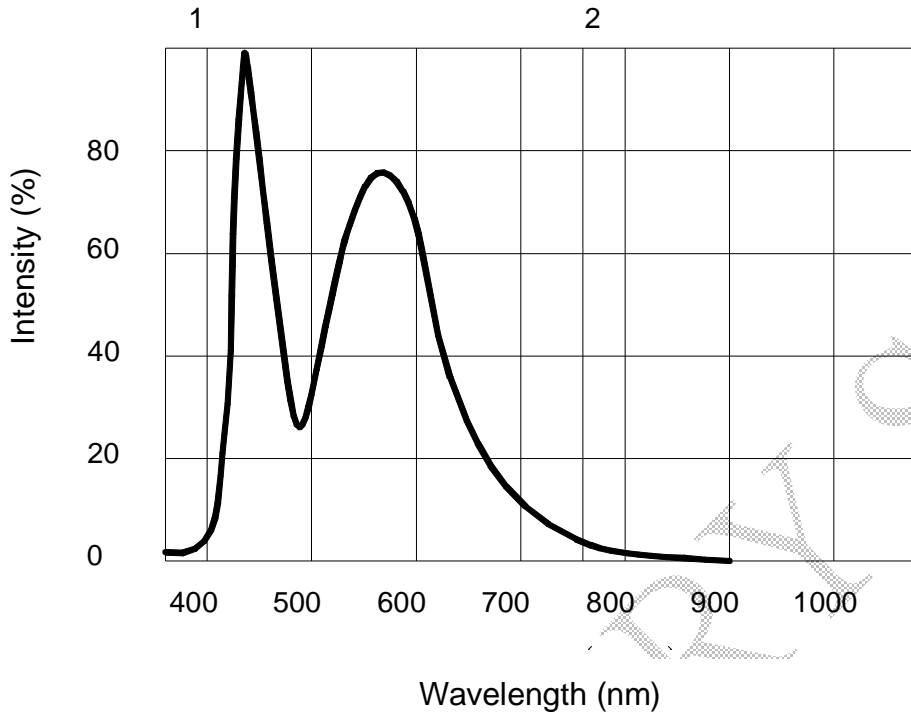
Note :

* : Temperature for using with aluminum board.

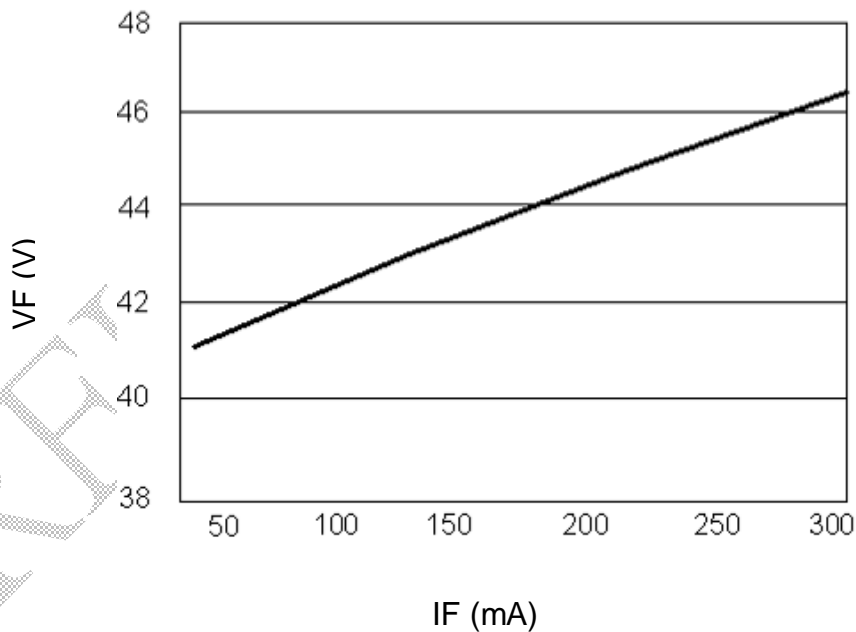
●Electro-Optical Characteristic(Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Flux	Φ		620		lm	IF=150mA
Viewing Angle	2 θ 1/2		130		deg	
Color Temperature	CCT		3000		K	IF=150mA
Forward Voltage	VF		43	47	V	IF =150mA
Power Dissipation	P		6.5		W	IF =150mA
Lumimous efficacy	η		100		Lm/ W	IF =150mA

•Typical Optical and Electrical

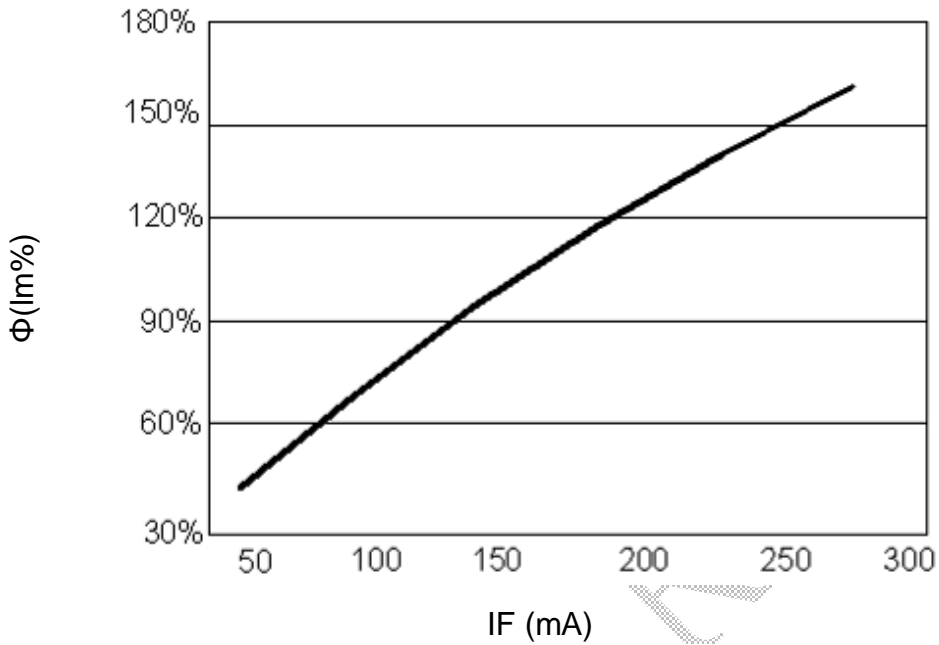


Relative Intensity VS Wavelength



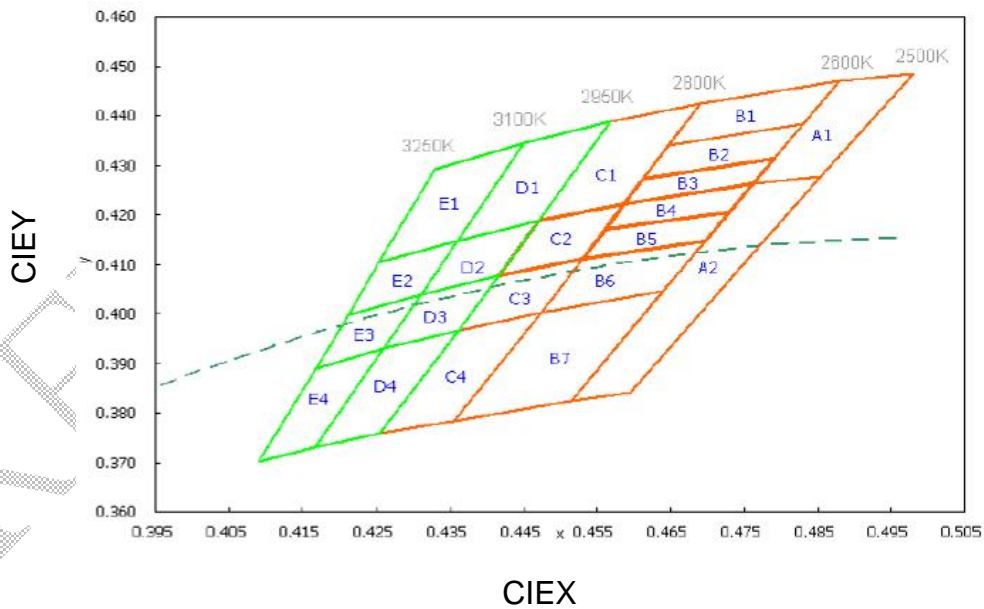
Forward Current VS Forward Voltage

•Typical Optical and Electrical



Forward Current VS Luminous Flux%

Warm White BIN Table



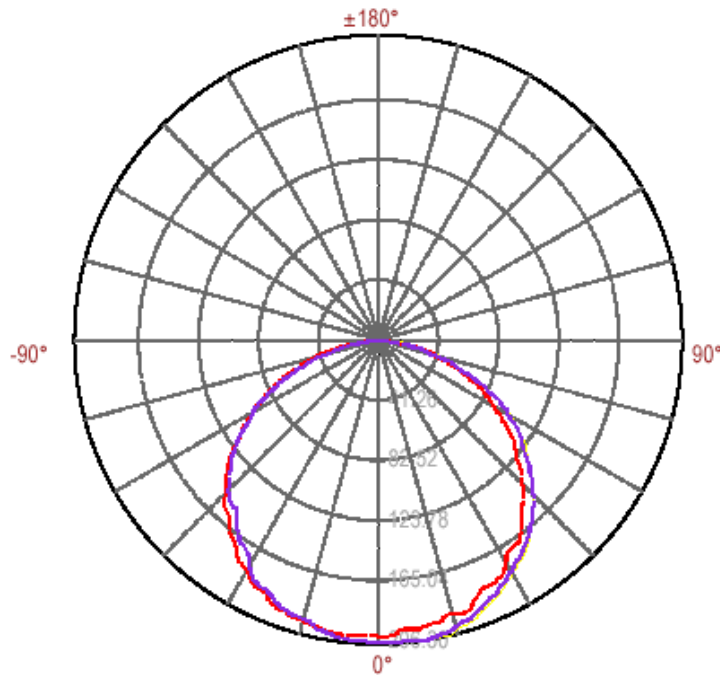
Warm—white Bin Structure

COROMATICITY COORDINATE (CIE1931_XY)

BIN Code	Chromaticity Coordinate (CIE 1931-xy)							
	x1	y1	x2	y2	x3	y3	x4	y4
A1	0.5002	0.4522	0.4901	0.4507	0.4762	0.4262	0.4854	0.4276
A2	0.4854	0.4276	0.4762	0.4262	0.4640	0.4045	0.4726	0.4060
A3	0.4726	0.4060	0.4640	0.4045	0.4478	0.3764	0.4561	0.3781
B1	0.4901	0.4507	0.4709	0.4463	0.4647	0.4340	0.4831	0.4383
B2	0.4831	0.4383	0.4647	0.4340	0.4613	0.4272	0.4791	0.4314
B3	0.4791	0.4314	0.4613	0.4272	0.4587	0.4222	0.4762	0.4262
B4	0.4762	0.4262	0.4587	0.4222	0.4563	0.4172	0.4730	0.4205
B5	0.4730	0.4205	0.4563	0.4172	0.4531	0.4110	0.4697	0.4147
B6	0.4697	0.4147	0.4531	0.4110	0.4474	0.4002	0.4640	0.4045
B7	0.4640	0.4045	0.4474	0.4002	0.4405	0.3873	0.4560	0.3908
B8	0.4560	0.3908	0.4405	0.3873	0.4328	0.3731	0.4478	0.3764
C1	0.4709	0.4463	0.4585	0.4425	0.4470	0.4187	0.4587	0.4222
C2	0.4587	0.4222	0.4470	0.4187	0.4417	0.4076	0.4531	0.4110
C3	0.4531	0.4110	0.4417	0.4076	0.4362	0.3967	0.4474	0.4002
C4	0.4474	0.4002	0.4362	0.3967	0.4300	0.3845	0.4405	0.3873
C5	0.4405	0.3873	0.4300	0.3845	0.4229	0.3706	0.4328	0.3731
D1	0.4585	0.4425	0.4466	0.4382	0.4360	0.4148	0.4470	0.4187
D2	0.4470	0.4187	0.4360	0.4148	0.4311	0.4039	0.4417	0.4076
D3	0.4417	0.4076	0.4311	0.4039	0.4260	0.3930	0.4362	0.3967
D4	0.4362	0.3967	0.4260	0.3930	0.4205	0.3813	0.4300	0.3845
D5	0.4300	0.3845	0.4205	0.3813	0.4142	0.3678	0.4229	0.3706
E1	0.4450	0.4345	0.4360	0.4148	0.4254	0.4103	0.4330	0.4293
E2	0.4360	0.4148	0.4311	0.4039	0.4211	0.3999	0.4254	0.4103
E3	0.4311	0.4039	0.4260	0.3930	0.4168	0.3890	0.4211	0.3999
E4	0.4260	0.3930	0.4167	0.3730	0.4090	0.3700	0.4168	0.3890

Typical Optical and Electrical

Typical polar radiation pattern for lambertion



●Bin Code List

Luminous Flux (Φ),(Unit: lm ,IF=150mA)		
Bin Code	Min	Max
G	375	490
H	490	640
J	640	835

Including test tolerance $\pm 10\%$

Forward Voltage(VF),(Unit: V, IF=150mA)		
Bin Code	Min	Max
VH	35	40
VI	40	45
VJ	45	50

Including test tolerance $\pm 0.1V$



COB LED

CR07W-P1C54-CD000

REV:A/0

●Label Explanation

P/N: _____ CR07W-P1C54-CD000 _____
 QTY: _____ XXXX _____
 LOT NO.: _____ LC1111001 _____
 BIN NO.: _____ H/D2/3000/VI _____

PART NO: CR07W-P1C54-CD000

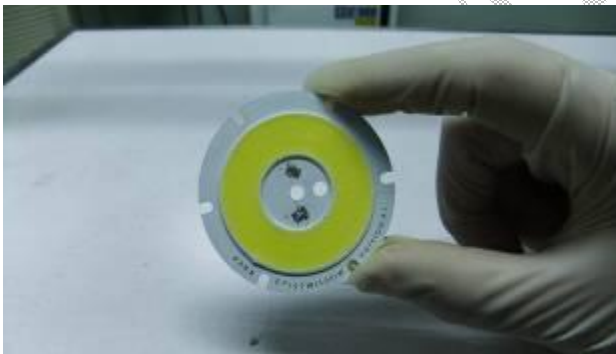
LOT NO: L C 11 11 003
 A B C D E

- A---L: Local
- B--C: COB
- C--- Year
- D--- Month
- E--- For series number

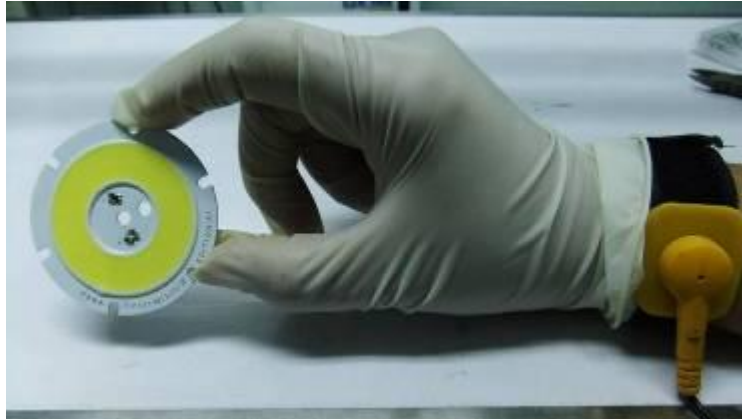
BIN NO: Bin Code

●Caution

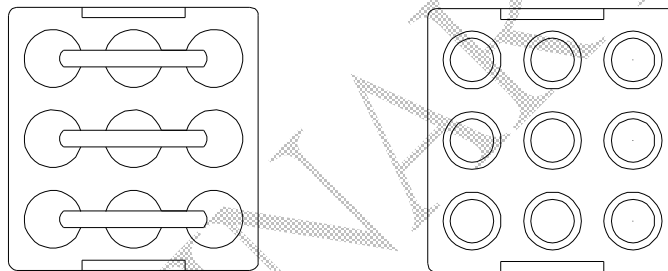
(1).Handling note: Do not touch LED's surface.



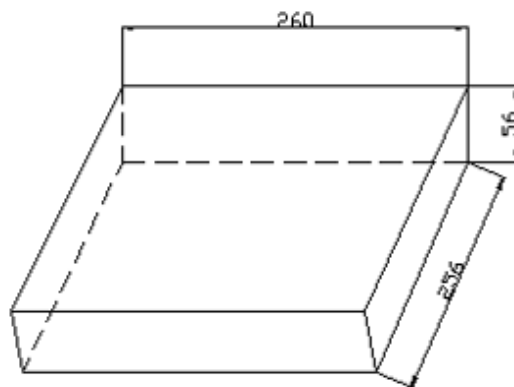
(2) Please wear anti-static wrist strap and gloves to prevent ESD damage when handling.



●Packing Specification



Carton A (1 pcs × 9 = 9 pcs)



Carton B (9 pcs × 2 = 18 pcs)

Note:

- 1. All dimensions are in millimeters.
- 2. Normal packing Quantity: 9 pcs.
- 3. The carton B contains 2 cartons A at maximum.

●Storage

1. Do not open the moisture proof bag before the devices are ready to use.
2. Before the package is opened, LED should be stored at temperatures less than 30°C and humidity less than 50%.
3. LED may be stored for 6 months. When the storage time has reached more than 6 months, LED should be stored in a sealed container filled with Nitrogen gas.
4. After the package is opened, LED should be stored at temperatures less than 30°C and humidity less than 30%.
5. LED should be used within 168 hours (7 days) after the package is opened.

●E-Power Operating Procedure

1. E-power 07W series products should be operated at 150 mA for ideal performance, but not more than 200mA.
2. E-power 07W series products are sensitive to static. Operators must wear static wristband (wireless static wristband is prohibited) and be well grounded while working in the environment with an ionizing air blower. Anti-static requirement should be under ESD 2000V.
3. Sufficient thermal management must be applied. Large LED forward current will cause high junction temperature and reduce LED life.
4. Recommended Assembly Method is shown in Figure 1, E-power 07W series products must be used in conjunction with heat-sinking devices and a thin layer of thermal grease should be applied to the bottom surface of the LED source

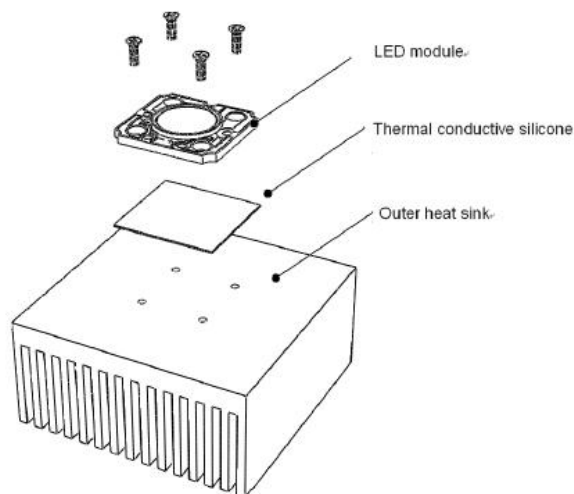


Figure 1

●Reliability Test

Test Item	number	Test Condition	Stress duration	result
High Temperature Storage Test	20pcs	100℃	1000hours	Pass
Low Temperature Storage Test	20pcs	-40℃	1000 hours	Pass
Room Temperature Operation	20pcs	Ta= 25℃ IF =150mA	1000hours	Pass
Temperature Cycle	20pcs	H:+100℃ 30mins L: -20℃ 15mins	200 Cycles	Pass
High Temperature High Humidity Operation	20pcs	Ta=60℃ RH= 85% IF=150mA	500 hours	Pass

With heat sink, in a good thermal-exchange surrounding.

Failure Criteria:

1. No catastrophic(LED fail)
2. Lumen maintenance > 85%,
3. Change in Vf <10%.



COB LED

CR07W-P1C54-CD000

REV:A/0

● Part NO. System of E-Power LED

C R 07 W- P1 C 54- C D0 00

Special code : 00, Regular code
01 , 02...Special photoelectric
code

Ra: B0: 60-70 C0: 70-80 D0: 80-90

Lumimous efficacy:

A: 60-70lm/w ;B: 70-80lm/w;
C: 80-90lm/W;D: 90-100lm/W

Size code

Glue sealing method:

C: Coating L: Lens

Substrate :

P1: Aluminum P2: Copper
P3: Ceramic P4: Others

Color: Cool White

N: Netural White W: Warm White

Power: 20: 20W 07: 7W...

Shape: S: Square R: Round L:
Line

C: COB