



**Series: CERAMIC CHIP** 

**Description: GNSS-DUAL WIFI-DSRC ANT** 

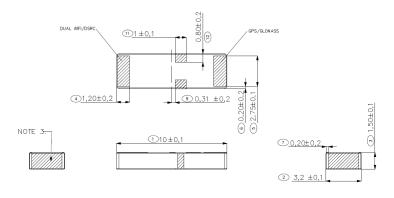
PART NUMBER: W3095

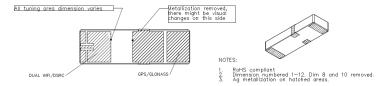
### **Features:**

- 3 in 1 solution on a ceramic chip with two separate feeds.
- Need smaller antenna space on PCB to integrate GPS/GLONASS, Dual WiFi and DSRC bands
- Compact Size (L x W x H) 10 x 3.2 x 1.5mm.
- Fully SMD compatible

# **Applications:**

- GPS / GLONASS (1575-1610MHz)
- IEEE 802.11 a/b/g/n compliant 2.4 and 5GHz. (2400-2485/ 4900-5850MHz)
- DSRC (5850-5925MHz)
- Mobile navigation device





#### All dimensions are in mm / inches

Issue: 1804

In the effort to improve our products, we reserve the right to make changes judged to be necessary. CONFIDENTIAL AND PROPRIETARY INFORMATION

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# **ELECTRICAL SPECIFICATIONS**

ELECTRICAL SPECIFICATIONS			
Frequency, Port 1	1.575-1.610 GHZ		
Frequency, Port 2	2.4-2.485/ 4.9-5.925 GHz		
Normal Impedance	50 Ohm		
VSWR, Port 1	<2.5:1		
VSWR, Port 2	<2:1at low band <2.8:1 at high band		
Efficiency (Typ.), Port 1	60 %		
Efficiency (Typ.), Port 2	80/ 50 %		
Peak Gain, Port 1	1.5 dBi		
Peak Gain, Port 2	2.5/ 3.5 dBi		
Isolation (Min.) at 1.575-1.610 GHz	22 dB		
Isolation (Min.) at 2.4-2.485 GHz	20 dB		
Isolation (Min.) at 4.9-5.925 GHz	22 dB		
Polarization	Linear		
Interface	SMD Mount		



#### **TECHNICAL DATA SHEET**

**Description**: GNSS-DUAL WIFI-DSRC ANT

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# **MECHANICAL SPECIFICATIONS**

Block material Dielectric ceramic

Plating material Ag

Weight 0.24 g

**RoHS Compliant Product** 

Tape and reel packing

Lead free materials

Lead free soldering compatible

### **ENVIRONMENTAL SPECIFICATIONS**

Operating temperature

-30 to +80° C



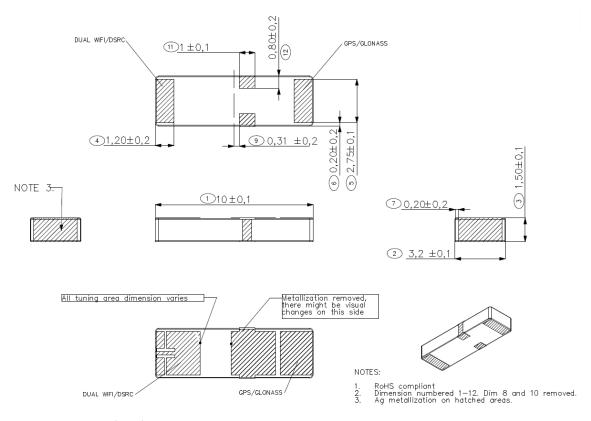




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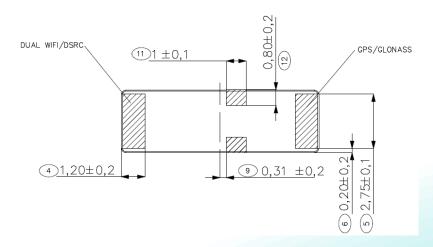
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### **MECHANICAL DRAWING**



Dimensions: (mm)

# Details of antenna pad dimension on the bottom in mm.



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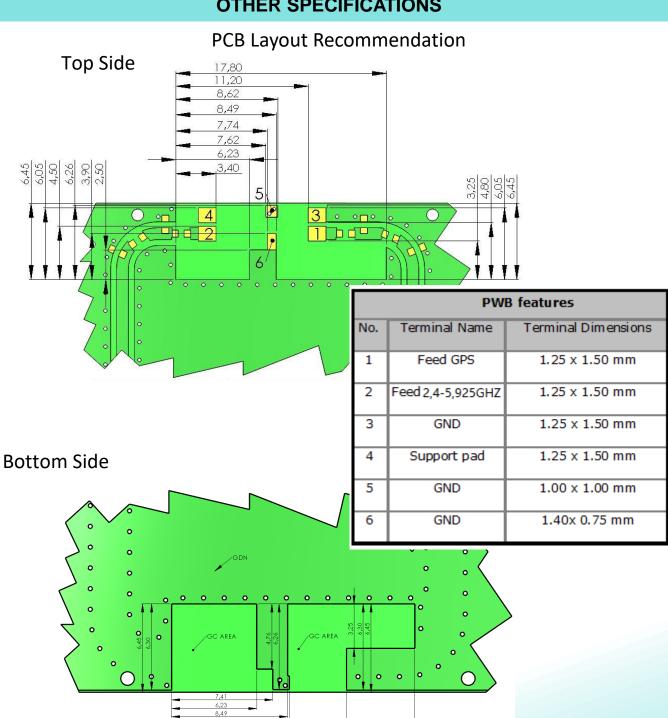




**Series: CERAMIC CHIP** 

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### **OTHER SPECIFICATIONS**



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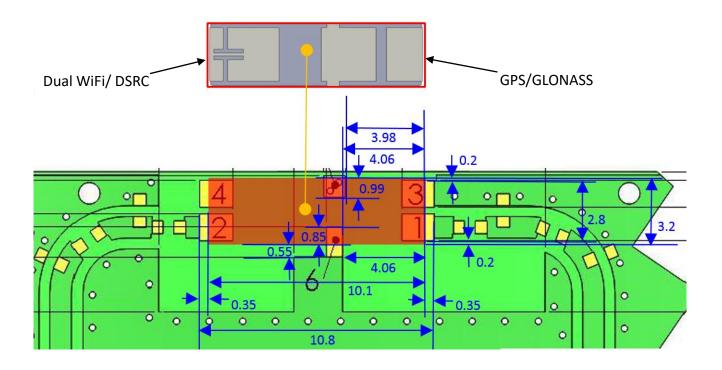


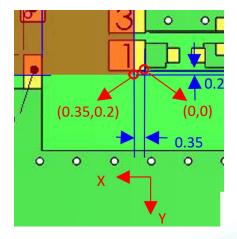
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**PART NUMBER: W3095** 

## **OTHER SPECIFICATIONS**

# Antenna Alignment on PCB Layout







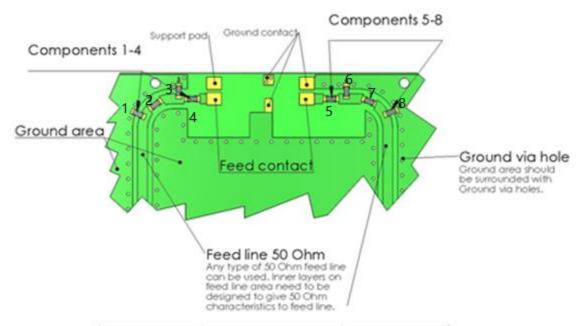


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### **OTHER SPECIFICATIONS**

# Suggested Matching on PCB



Antenna	Component NO.	Value
2.4-5.925GHz	1	Optional, not in use
2.4-5.925GHz	2	0 Ohm
2.4-5.925GHz	3	2.2nH
2.4-5.925GHz	4	1.2pF
GPS/Glonass	5	0 Ohm
GPS/Glonass	6	1.8pF
GPS/Glonass	7	0 Ohm
GPS/Glonass	8	Optional, not in use





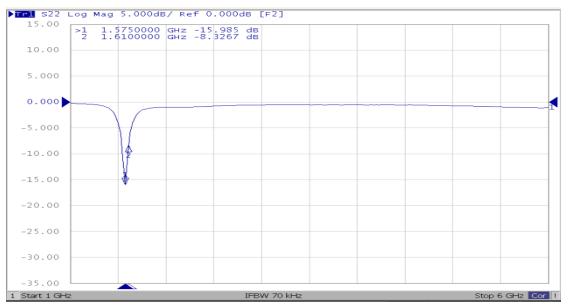
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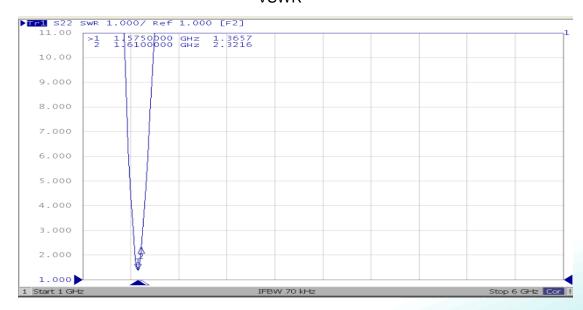
### **CHARTS**

# **Typical GPS/GLONASS antenna Return Loss**

LOG



#### **VSWR**





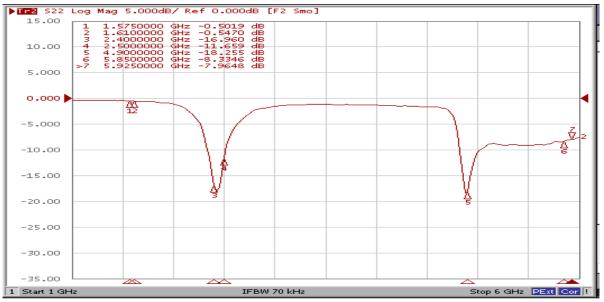


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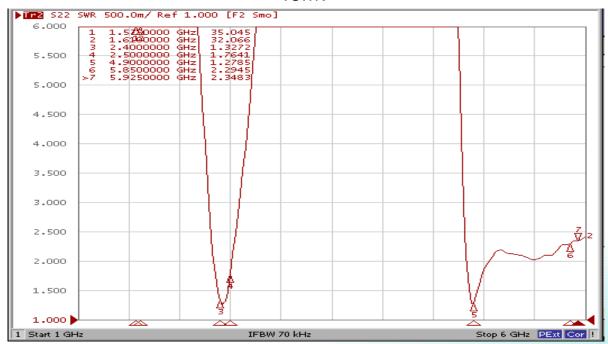
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### **CHARTS**

# **Typical WIFI antenna Return Loss**



### **VSWR**



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RóHS





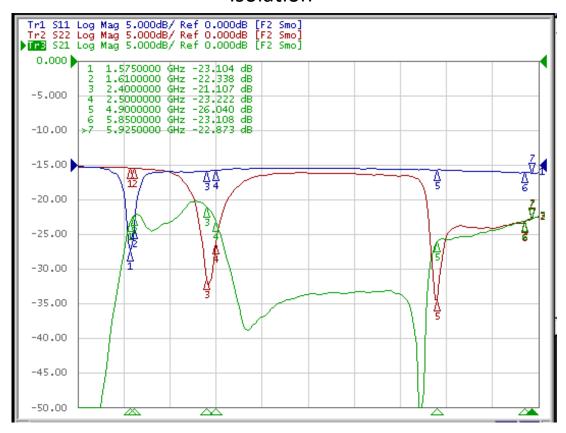
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**PART NUMBER: W3095** 

### **CHARTS**

# Typical Isolation

### Isolation







**Series: CERAMIC CHIP** 

70%

65%

55%

1575

1580

1585

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### **CHARTS**

# Typical Antenna Total Efficiency

GPS/GLONASS

60% ——Efficiency(%)

50%

1590

Frequency/MHz

1600

1605

1610

1595

# WIFI/DSKC

90%

70%

——Efficiency(%)

Frequency/MHz

50%





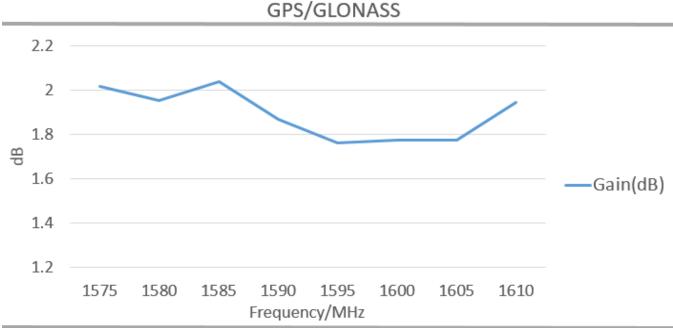


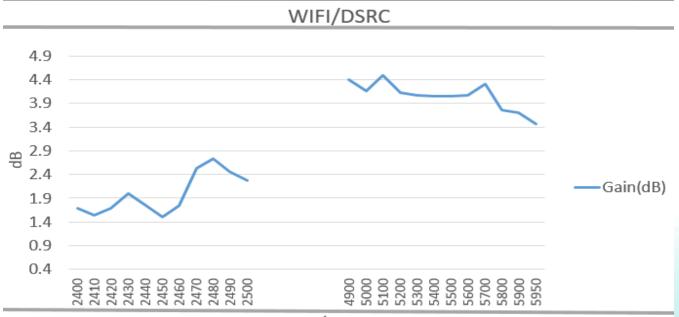
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### **CHARTS**

# Typical Antenna Peak Gain





Frequency/MHz





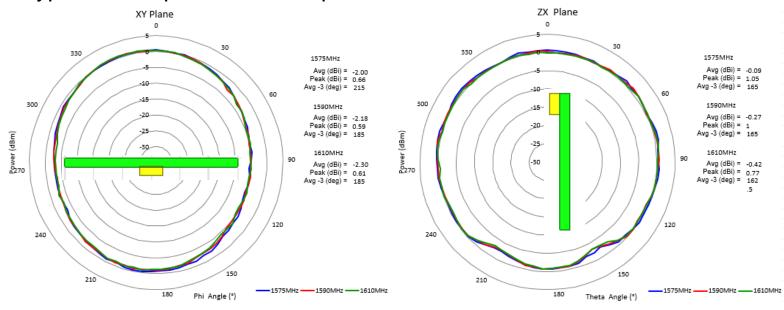


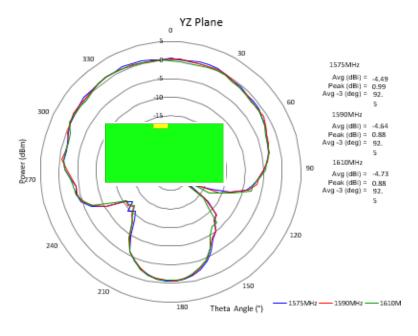
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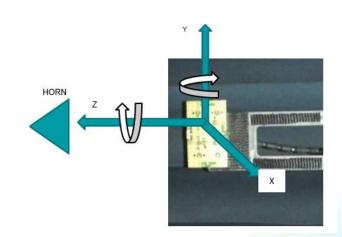
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### **CHARTS**

# Typical free space radiation pattern—GPS/GLONASS







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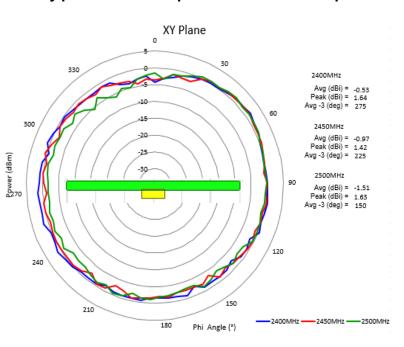
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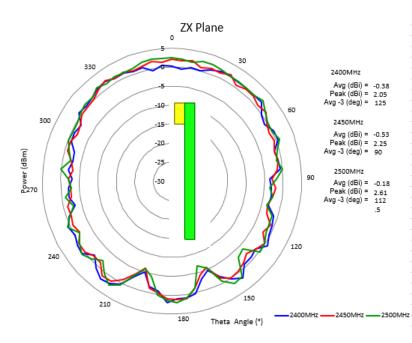
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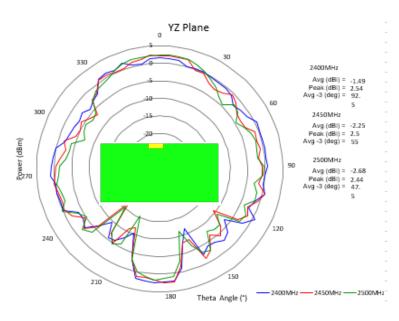
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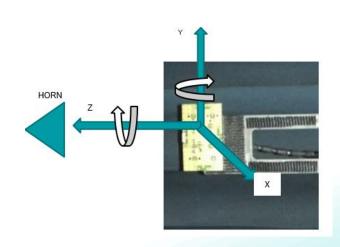
### **CHARTS**

# Typical free space radiation pattern—2.4G









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ROHS

14



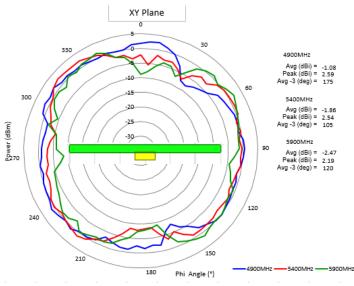


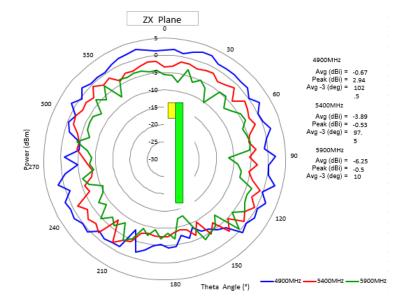
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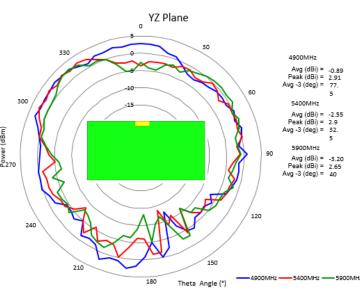
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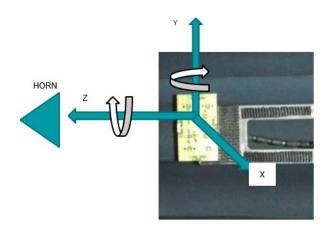
### **CHARTS**

# Typical free space radiation pattern—5G









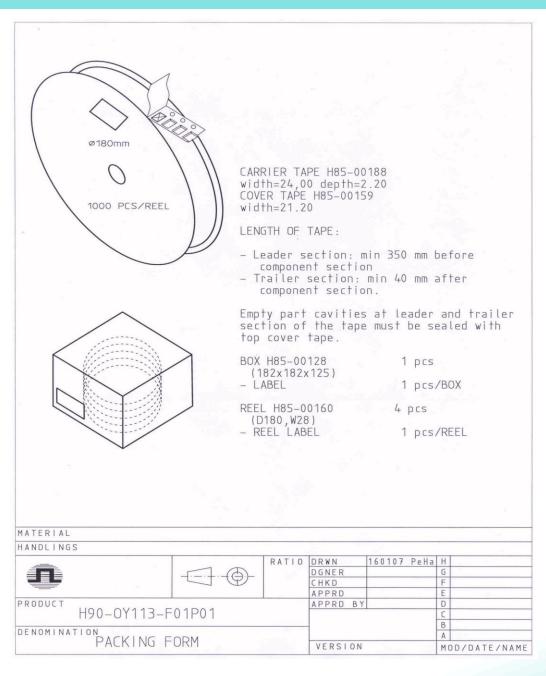




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### **PACKAGING**







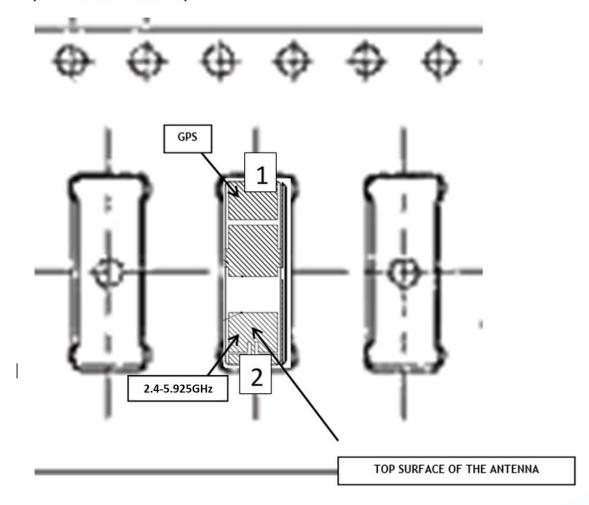
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#### **Block Orientation**

Antenna soldering pads facing down to the bottom of the carrier tape

#### Top view of the carrier tape





OOO «ЛайфЭлектроникс" "LifeElectronics" LLC

ИНН 7805602321 КПП 780501001 P/C 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 3010181090000000703 БИК 044030703

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

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- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
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- Наличие сертификата ISO.

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- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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