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**FSL Electronics Ltd**

**Data Sheet Ref : UBG 02**

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**Ultrabeam Transmitter**

**Technical Data**

**Supply Voltage**

1 by 9 Alkaline battery, type 6AM6, 6F22, PP3

**Power Consumption**

Activated : max 45mA

De-activated : max 10mA

**Range**

Dependant on ambient light

Typical 35m upwards

**Light Source**

3 by CQW13 emitters with mirror reflectors each giving high radiation intensity  
( 720 m W/SR typ.)

**Operating Temperature**

-20 c to 60 c

**Housing**

Dark brown ABS

**Switch Type**

Tactile membrane keypad

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## **FSL Electronics Ltd**

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### **Ultrabeam Receiver**

#### **Technical Data**

##### **Supply Voltage**

- (i) 12 V DC ( 10V - 15 V )
- (ii) 5 V DC - 30 V DC
- (iii) 220 / 240 V AC
- (iv) 110 V AC available on request )

##### **Operating Temp**

-20 c to 60 c

##### **Relay Switching Current**

8 amps constant DC  
10 amps constant AC

##### **Housing /Proofness**

Grey ABS IP55

##### **Power Consumption**

Typically 20 mA

##### **Delay on operate**

100ms

##### **Channels**

1 to 6 on standard unit  
Only one channel may be activated at a time.

##### **Delay on release**

100ms

#### **General Operation**

The system works as follows :

- The transmitter is directed towards the activating surface of one or more receivers.
- On activation of a push-button on the transmitter unit, pulse position modulated infra-red light is emitted. Simultaneously, a red LED lights to indicate transmission is taking place.
- When a valid code at the correct frequency is detected by the receiver, the corresponding channel will be activated. The frequency of the carrier signal is adjustable by a variable resistor on the transmitter and receiver units. This adjustment is not normally necessary as systems are normally shipped in matched pairs.

## Ultrabeam Infra-red Remote Control Unit

**Farnell Order No: 239 - 380**

The system consists of

- 1 A battery operated hand-held transmitter. Standard transmitters supplied with six channels (type 239-392).
- 2 A receiver unit supplied as standard with six channel outputs, sealed to IP55.

The system can be coded to 4 different channel groups explained in table 1.

### Transmitter Switch Settings

The 4 Way DIL switch should have all four switches in the on position to enable all six channels.

The 8 Way DIL switch is used to set the channel groups as shown in table 1.

### Receiver Switch Settings

Switches 1-2 are used to set the channel groups as shown in table 1.

Switches 3-8 allow channels 1-6 respectively to be enabled/disabled (for example, when SW3 is off, channel 1 is disabled).

**Table 1**

| Transmitter Unit |     |     |     |     |     |     |     |   |   |   | Receiver Unit |     |     |
|------------------|-----|-----|-----|-----|-----|-----|-----|---|---|---|---------------|-----|-----|
| 1                | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   | Decoder       | 1   | 2   |
| ON               | ON  | OFF | OFF | OFF | OFF | OFF | OFF | → | → | → | 926           | ON  | OFF |
| OFF              | OFF | ON  | ON  | OFF | OFF | OFF | OFF | → | → | → | 926           | OFF | ON  |
| OFF              | OFF | OFF | OFF | ON  | ON  | OFF | OFF | → | → | → | 927           | ON  | OFF |
| OFF              | OFF | OFF | OFF | OFF | OFF | ON  | ON  | → | → | → | 927           | OFF | ON  |

### Important

This Unit is supplied with an ML926 decoder in the IC1 position. This IC may be replaced by a ML927 decoder to use the extra codes in table 1.