



Revision History

| Version | Date       | Context           |
|---------|------------|-------------------|
| V00     | 2018.08.22 | Release           |
| V01     | 2018.09.25 | Update Resolution |

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## A. General Description

The IG380 area imager barcode scanner brings unmatched performance along with the latest advanced technology to the point-of-sale checkout operations, and it is a reliable bar code reader suitable for a wide range of environments. The IG380's features and its outstanding price-performance ratio make it the best solution for retail and POS applications.

The IG380 provides a 'black' or 'warm gray' color option, emphasizing the curving lines of the new enclosure and supports keyboard wedge, RS232 and USB interface. The powerful built-in decoder reads and discriminates all major 1D, 2D bar codes and GS1 DataBar™ symbologies, including damaged or poorly printed codes, reducing processing time and labor costs, while increasing accuracy.

Its barcode programming menu provides extensive configuration options. A stand option can be ordered to facilitate hand-free reading option and by configured to its automatic wake-up reading mode can extend its lifespan.

The IG380 provides customers with the most cost-effective solution in the market and is the best choice for any retail environment.



## B. Physical Characteristics

### Weight

|              |              |
|--------------|--------------|
| Body weight  | Approx. 90 g |
| Cable weight | Approx. 60 g |

### Material

|          |     |
|----------|-----|
| Material | ABS |
|----------|-----|

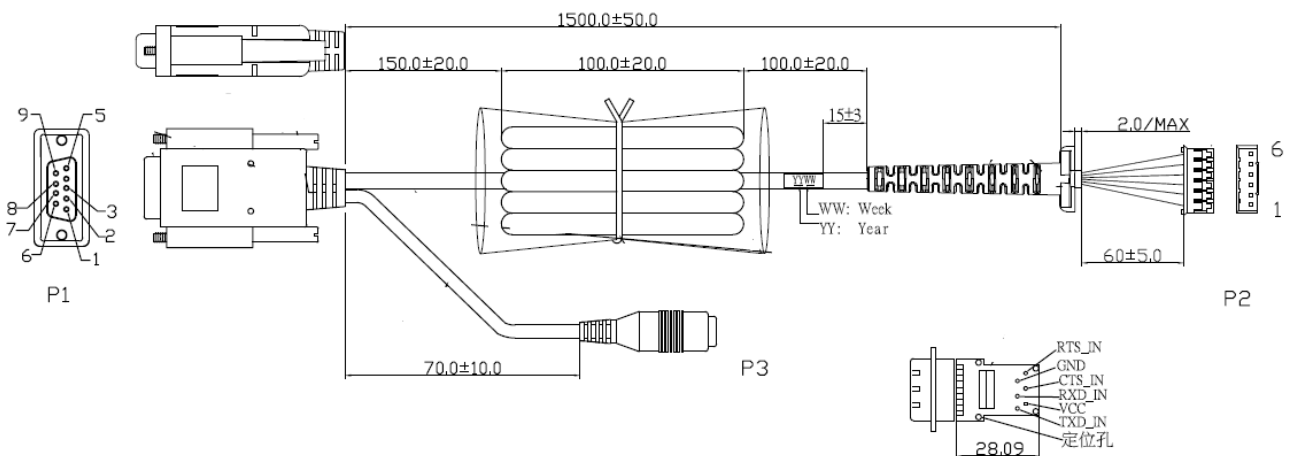
### Dimension

|           |                                       |
|-----------|---------------------------------------|
| Dimension | 65.01 mm W x 168.01 mm D x 54.92 mm H |
|-----------|---------------------------------------|

### Cable drawing

#### RS232 Interface :

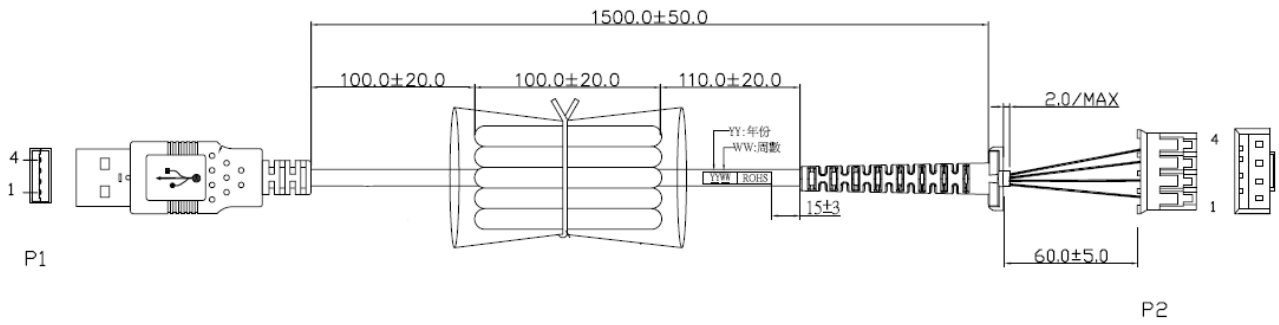
Unit :mm



| LIST      |           |        |    | Function  |
|-----------|-----------|--------|----|-----------|
| P3        | P1        | Color  | P2 |           |
| Shielding | 5         | Brown  | 6  | GND       |
| CORE      | 9         | Red    | 1  | POWER     |
|           | 2         | Orange | 2  | TXD       |
|           | 3         | Yellow | 3  | RXD       |
|           | 8         | Green  | 5  | RTS       |
|           | 7         | Blue   | 4  | CTS       |
|           | Shielding | GND    | 6  | Shielding |

**USB Interface :**

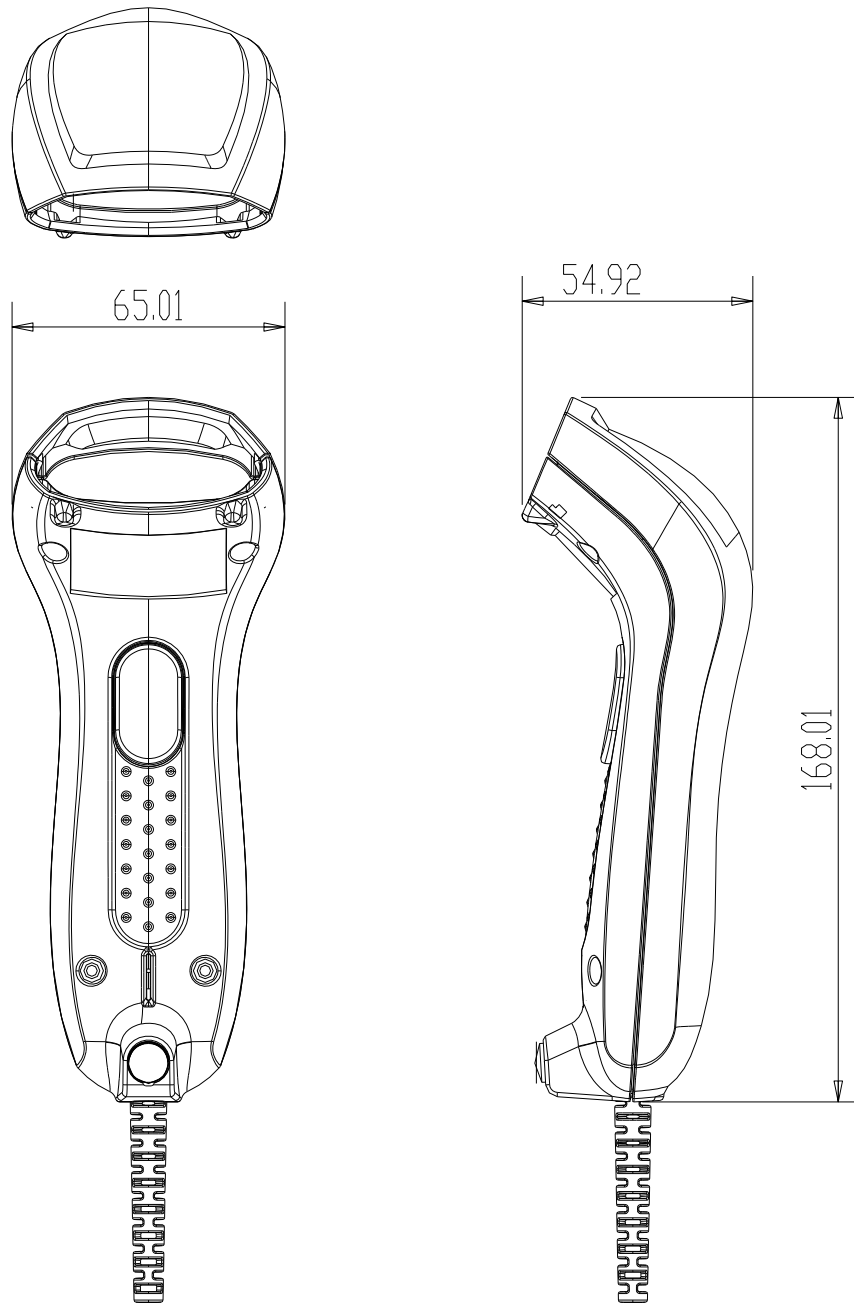
Unit : mm

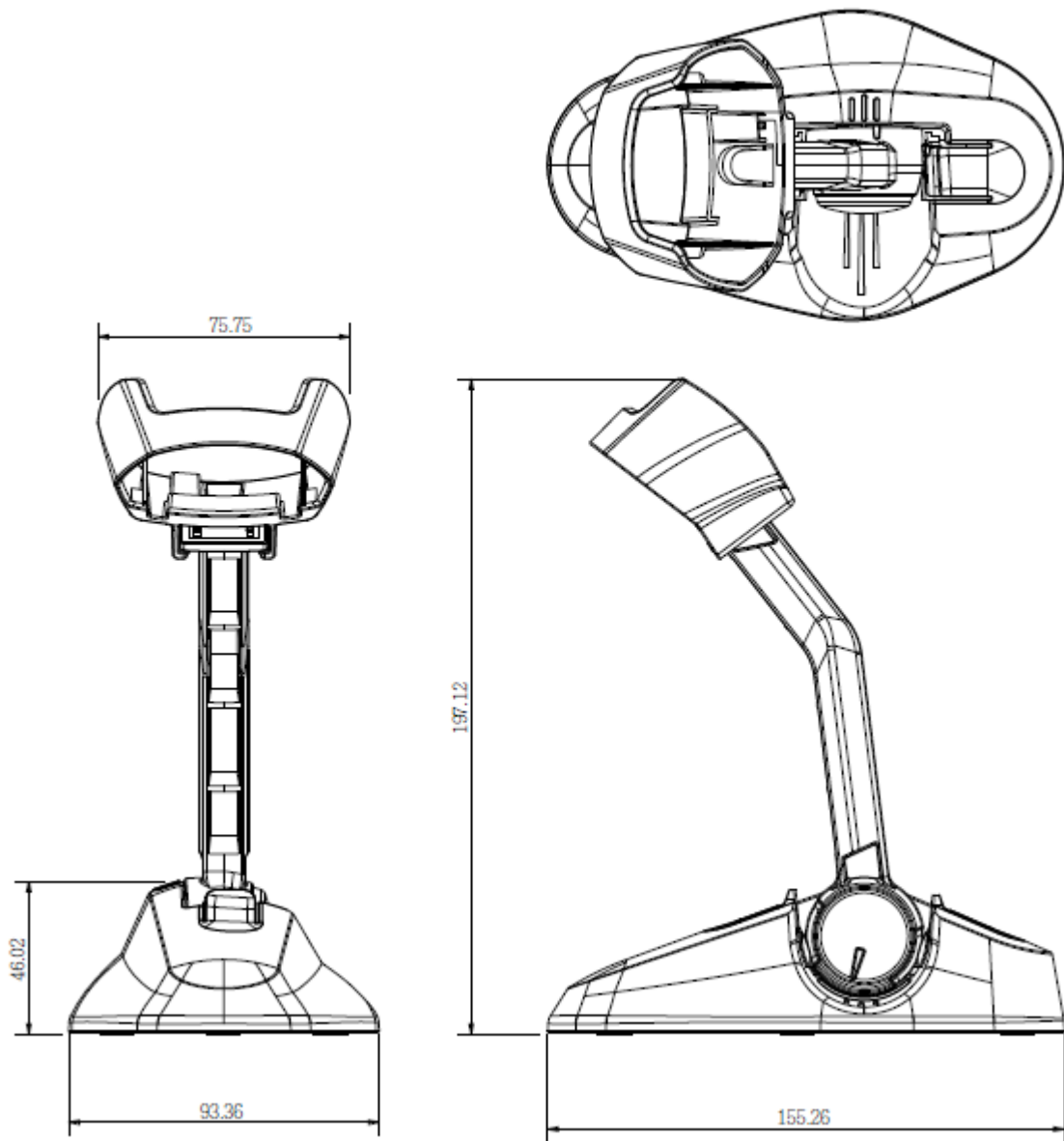


| LIST      |       |    | Function  |
|-----------|-------|----|-----------|
| P1        | Color | P2 |           |
| 1         | Red   | 1  | VCC       |
| 2         | Blue  | 3  | D-        |
| 3         | Green | 2  | D+        |
| 4         | Brown | 4  | GND       |
| Shielding | GND   | 4  | Shielding |

**Mechanical drawing**

Unit : mm







## C. Electrical Characteristics

| Interface                 | RS232  | USB    |
|---------------------------|--------|--------|
| Supply Voltage            |        |        |
| Output Voltage (Typ.)     | ±9V    | +5V±5% |
| Output low Voltage (Max.) | -      | 0.7V   |
| Current Draw              |        |        |
| Stand by (Typ.)           | 180 mA | 180 mA |
| Operation (Typ.)          | 360 mA | 360 mA |

## D. Performance

|                      |  |
|----------------------|--|
| Light Source         | White light LED  |
| Sensor               | 752 (H) x 480 (V) pixels                                 |
| Field of view        | Horizontal – 40°, Vertical – 25°                         |
| Scan Rate            | 60 fps   |
| Reading Distance     | 250mm@20mil/0.5mm, PCS90%                                |
| Print Contrast Ratio | PCS45%@5mil/0.127mm                                      |
| Resolution           | 3mil/0.076mm@PCS90% Code39,<br>10mil/.26mm@PCS90% QRCode |
| Reading Angle        | <i>Test Conditions : Code 39, 10mil/0.25mm,PCS90%</i>    |
| Pitch Angle          | 5°~60° (±5°)   |
| Skew Tolerance       | 5°~60° (±5°)   |
| Ambient Light        | 100,000 Lux Max.   |

## E. Environmental

|                       |                                   |
|-----------------------|-----------------------------------|
| Operating Temperature | 0 °C to 50 °C (32 °F to 122 °F)   |
| Storage Temperature   | -20 °C to 70 °C (-4 °F to 158 °F) |
| Relative Humidity     | 20% to 95% (Non-condensing)       |

## F. Readable Symbologies

| 1D Symbologies               | Readable | Default Enable |
|------------------------------|----------|----------------|
| UPC-A                        | V        | V              |
| UPC-E                        | V        | V              |
| EAN-8/JAN-8                  | V        | V              |
| EAN-13/JAN-13                | V        | V              |
| Code 39                      | V        | V              |
| Code 128                     | V        | V              |
| Codabar/NW7                  | V        | V              |
| Interleaved 25               | V        | V              |
| Industrial 25                | V        |                |
| Matrix 25                    | V        |                |
| Code 93                      | V        |                |
| China Post                   | V        |                |
| Code 11                      | V        |                |
| MSI/Plessey                  | V        |                |
| Telepen                      | V        |                |
| GS1 Databar Omni-directional | V        |                |
| GS1 Databar Limited          | V        |                |
| GS1 Databar Expanded         | V        |                |

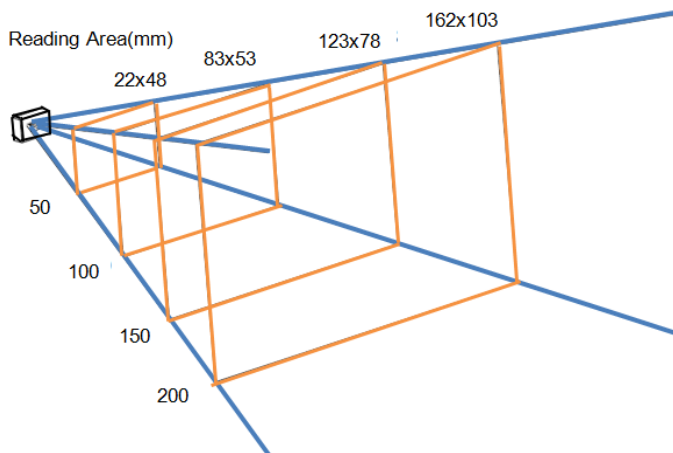
| 2D Symbologies | Readable | Default Enable |
|----------------|----------|----------------|
| Aztec          | V        |                |
| Data Matrix    | V        | V              |
| PDF 417        | V        | V              |
| Micro PDF 417  | Optional |                |
| QR Code        | V        | V              |
| Micro QR Code  | V        |                |
| GM Code        | Optional |                |
| Han Xin Code   | Optional |                |

### G. Depth of field

| Barcode           | Depth of field |
|-------------------|----------------|
| 3mil Code39       | 30 ~ 60 mm     |
| 4mil Code39       | 30 ~ 90 mm     |
| 5mil Code39       | 30 ~ 100 mm    |
| 6mil Code39       | 30 ~ 110 mm    |
| 10mil Code39      | 30 ~ 150 mm    |
| 13mil Code39      | 30 ~ 180 mm    |
| 20mil Code39      | 30 ~ 250 mm    |
| 20mil QR Code     | 40 ~ 150 mm    |
| 10mil PDF417      | 40 ~ 110 mm    |
| 20mil PDF417      | 40 ~ 150 mm    |
| 20mil Data Matrix | 40 ~ 200 mm    |

Note:

1. The test is under ambient light 700 ~ 800 Lux.
2. Reading area

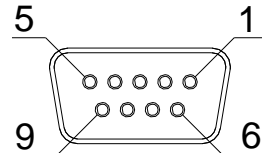


## H. Pin Assignment

### a) RS-232 Interface

#### DB 9 Female

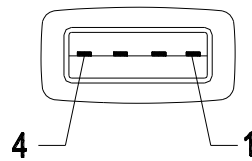
| Pin No.    | Function |
|------------|----------|
| 2          | TXD      |
| 3          | RXD      |
| 5          | GND      |
| 7          | CTS      |
| 8          | RTS      |
| 9          | Vcc/+5V  |
| Power Lead | Vcc/+5V  |



### b) USB Interface

#### USB A Type Male

| Pin No. | Function |
|---------|----------|
| 1       | Vcc      |
| 2       | D-       |
| 3       | D+       |
| 4       | GND      |



## I. Reliability

### Life Time

|                  |                                   |
|------------------|-----------------------------------|
| Trigger Switch   | 1,000,000 times @ 1kg ±50g cycles |
| MTBF(Calculated) | 50,000 hours                      |

### Thermal Shock

|            |  |
|------------|--|
| High Temp. | 60 °C (140 °F)                                       |
| Low Temp.  | -20 °C (-4 °F)                                       |
| Cycle time | 30 minutes for high temp. , 30 minutes for low temp. |
| Cycles     | 24 cycles  |

|                    |   |
|--------------------|---|
| Cable Bending Test | 25,000 times minimum (30 times/min @ 200g/90 °) |
|--------------------|---|

|                 |   |
|-----------------|---|
| Drop Resistance | 59.05 inches (150cm) drop on concrete surface |
|-----------------|---|

|                          |                                    |
|--------------------------|------------------------------------|
| Electro-Static Discharge | Both contact and air at up to 16KV |
|--------------------------|------------------------------------|