OPTICON

C37

The C37 is a handheld linear image scanner.

Specifications Manual

All information subject to change without notice.

Document History

Model Number:	C37	Specification Number:	SS09046
Edition:	1	Original Spec Number:	SS09045
Date:	2009-10-05		

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Limited Warranty and Disclaimers

PLEASE READ THIS MANUAL CAREFULLY BEFORE INSTALLING OR USING THE PRODUCT.

Serial Number

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The packing materials are recyclable. We recommend that you save all packing material to use should you need to transport your scanner or send it for service. Damage caused by improper packaging during shipment is not covered by the warranty.

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1. Abstract

This manual provides specifications for the C37 barcode scanner.

2. Overview

The C37 is a handheld CCD barcode scanner. A new scanning algorithm and 2500 pixels-CCD linear image sensor provide smooth scanning performance.

The C37 can be configured to scan both positive and negative barcodes. Scanned data is transferred via an RS-232C, USB, or Wedge interface. Auto-trigger settings are available.

The C37 complies with RoHS.

Supported symbologies:

Linear (1D)	Postal
JAN/UPC/EAN, incl. add-on	Chinese Post Matrix 2of5
Codabar/NW-7	Korean Postal Authority Code
Code 11	
Code 39	
Code 93	
Code 128	
Composite Codes: GS1-128 (incl. CC-A/B/C)	
GS1-128 (EAN-128)	
GS1 Databar (RSS) (incl. CC-A/B) Limited/Expanded	
IATA	
Industrial 2of5	
Interleaved 2of5	
ISBN-ISMN-ISSN	
Matrix 2of5	
MSI/Plessey	
S-Code	
Telepen	
Tri-Optic	
UK/Plessey	

3. Physical Features

3.1. Dimensions
W 74.5 × D 149.5 x H 52.5 mm

3.2. Weight
85 grams ± 5 grams (excluding cable weight)

4. Environmental Specifications

4.1. Operating Temperature and Humidity
Temperature: 0° to +50° C

Humidity: 5 to 95% RH

4.2. Storage Temperature and Humidity
Temperature: -20° to +60° C

Humidity: 5 to 95% RH

4.3. Ambient Light Immunity
Decoding performance is guaranteed when the range of illumination on a barcode surface is between zero and the following values:

| Incandescent light | 10,000 lx |
| Fluorescent light | 10,000 lx |
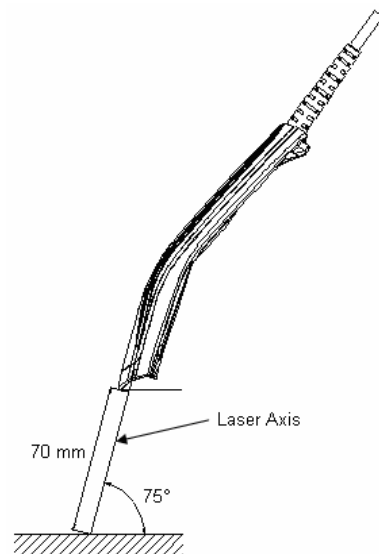
Figure 1: Ambient light immunity

Conditions

Barcode Sample: OPTOELECTRONICS Test Sample

PCS:	0.9
Resolution:	0.25 mm
Symbology:	9-digit Code 39
Quiet Zone:	10 mm
N/W Ratio:	1:2.5
Distance:	70 mm
Angle:	α = 0° β = 15° γ = 0°
Curvature:	R = ∞
Power Supply Voltage:	5.0 V

Direct light or specular reflection light from a source should be prevented from entering the acceptance area.

Note: α, β and γ respectively represent pitch, skew and tilt. Please see section 7 for how these values are defined.

5. Electrical Specifications

5.1. Framework and Structure

This product consists of an optical section, a decode and a communication section. The optical section includes a CCD for decoding and an illumination LED. The decode section decodes scanned data and carry out signal processing. The communication interface section converts 3.3V power supply and outputs decoded data and signals to the buzzer, LEDs and trigger key

✦ The C37 with RS-232C interface requires the supplied AC adaptor.

✦ The C37 with Wedge or USB interface uses bus power. It does not require an AC adaptor.
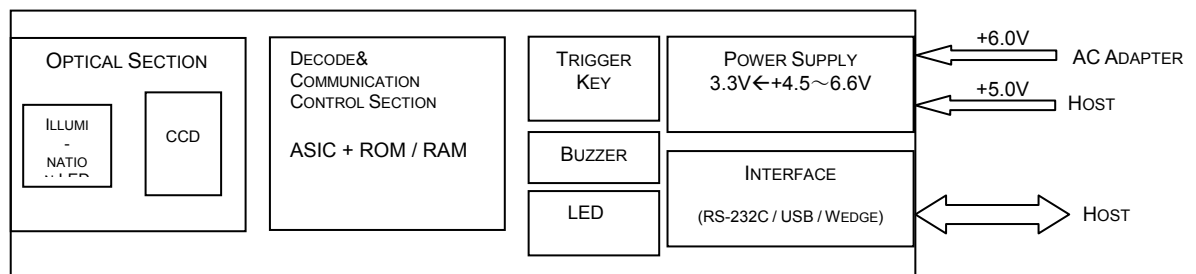
Figure 2: Framework and structure diagram

5.2. Electrical Characteristics

5.2.1. RS232

Parameter	Symbol	Min	Typ	Max	Unit
Operating voltage	V_{OP}	4.5	6.0	6.6	V
Operating current 1: LED: ON, Buzzer: OFF	I_{OP}	—	95	110	mA
Operating current 2: LED: ON, Buzzer/LED: OFF	I_{OP}	—	150	180	mA
Rush current peak	I_{PEAK}	—	350	400	mA
Stand-by current 1: Auto-trigger OFF	I_{PRE}	—	35	40	mA
Stand-by current 2: Auto-trigger ON	I_{PRE}	—	60	70	mA

5.2.2. USB / Wedge

Parameter	Symbol	Min	Typ	Max	Unit
Operating voltage	V_{OP}	4.5	5.0	5.5	V
Operating current 1: LED: ON, Buzzer: OFF	I_{OP}	—	95	110	mA
Operating current 2: LED: ON, Buzzer/LED: OFF	I_{OP}		150	180	mA
Rush current peak	I_{PEAK}	—	250	300	mA
Stand-by current 1: Auto-trigger OFF	I_{PRE}	—	35	40	mA
Stand-by current 2: Auto-trigger ON	I_{PRE}	—	60	70	mA

5.3. AC Adaptor Specifications

5.3.1. Input Specifications

Parameter	Value
Power supply voltage	AC 90 V to 265 V
Power supply frequency	47 Hz to 63 Hz
Maximum supply current	0.5 A
Inrush current	50 A/AC 240 V

5.3.2. Output Specifications

Parameter	Value
Output voltage	6.0 V ±5%
Power ripple	120 m Vp-p max. (rated load)
Maximum current	2 A
Short-circuit protection	Available

Conditions

- Connect 1Ω resistance to a power supply line in series and measure the current by the voltage between both ends of resistance.
- Power supply voltage is measured at a connector terminal area.
- The current value depends on the interface type and host computer to which the device is connected.

6. Optical Specifications

6.1. CCD Specifications

Parameter	Specification	Unit
Light-emitting element	Red LED	—
Emission wavelength	630 ±10 (25° C)	nm
Scanning method	CCD Linear Image Sensor	—
Scanning speed	200 ±20	scans/s
Number of pixels	2500	—

Notes:

Refer to chapter 15, "Trigger and Read Options," to read about the scan modes.

Refer to chapter 7, "Technical Specifications," to read about scanning performance.

7. Technical Specifications

The conditions for technical specifications are as follows, unless otherwise specified in each section.

Conditions

Ambient temperature and humidity:	Room temperature (5 to 35º C) Room humidity (45% to 85% RH)
Ambient light:	500 to 1000 lx
Background:	Barcode = black Space = white Margin = white Background of label = black
Power supply voltage:	6.0 V (RS-232C) / 5.0 V (USB, Wedge)
Decoding test:	Approve the performance when decoding is successful in all ten tests. (Decoding is deemed successful when completed in 0.5 seconds or less.)

7.1. Print Contrast Signal (PCS)

0.45 or higher (over 70% of reflectivity of space and quiet zone).

$$PCS = \frac{\text{Reflectance of white bar} - \text{Reflectance of black bar}}{\text{Reflectance of white bar}}$$

Scanning performance may decline if dirt or scratches mar the optical window. Keep the optical window clean.

7.2. Minimum Resolution

0.125 mm

Conditions

Barcode Sample: OPTOELECTRONICS Test Sample

Label: PCS = 0.9, Code 39

7.3. Scan Area

7.3.1. Maximum Scanning Width

65 mm

Conditions

Barcode Sample: OPTOELECTRONICS Test Sample

Label: PCS = 0.9, Resolution = 0.2 mm

7.3.2. Depth of Field

0 to15 mm

The depth of field is measured from the edge of the scanner.

Figure 3: Depth of field
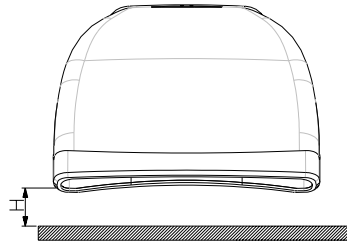
Conditions

Barcode Sample: OPTOELECTRONICS Test Sample

N/W Ratio:	1:2.5
Angle:	α = 0°, β = 0°, γ = 0°
Curvature:	R = ∞

7.4. Pitch, Skew, and Tilt

7.4.1. Pitch Angle

α = ±30°

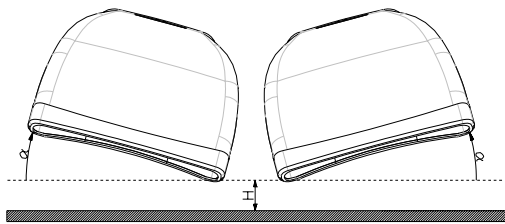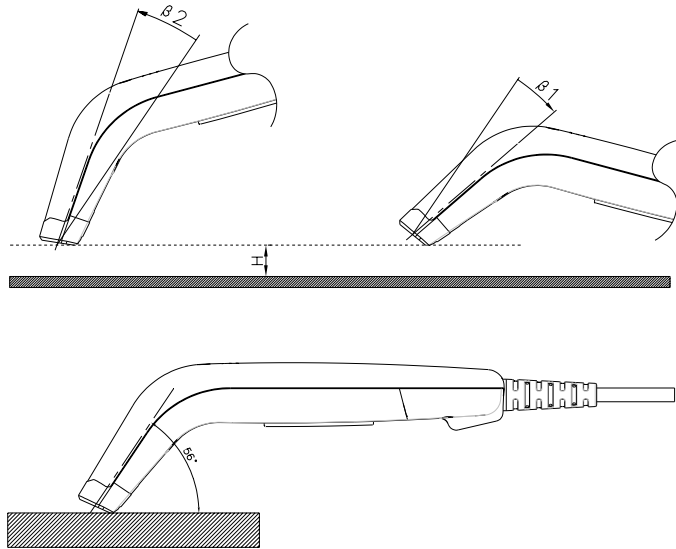*Figure 4: Pitch*

7.4.2. Skew Angle and Dead Zone

Scanning performance is guaranteed when skew angle: β ≤ ±70° (Excluding dead zone)

Dead zone: β = ±20° (There are some areas in which decoding fails due to specular reflection)

β1 = β2 = 0°

Figure 5: Skew angle and dead zone

7.4.3. Tilt Angle
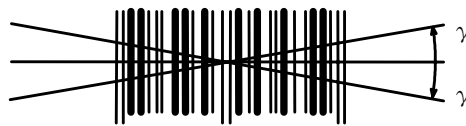
Scanning performance is guaranteed when γ ≤ ±25°

Figure 6: Tilt angle

Conditions

Barcode Sample: OPTOELECTRONICS Test Sample

Angles: **Pitch angle:** Skew angle: β = +0°, Tilt angle: γ = 0°
                 Tilt angle: Pitch angle: α = 0°, Skew angle: β = +0°
                 Skew angle, Dead zone: Pitch angle: α = 0°, Tilt angle: γ = 0°

Curvature: R = ∞

7.5. Curvature

With 8-digit JAN/UPC/EAN barcodes, decoding performance is guaranteed when R = 15 mm.

With 13-digit JAN/UPC/EAN barcodes, decoding performance is guaranteed when R = 20 mm.
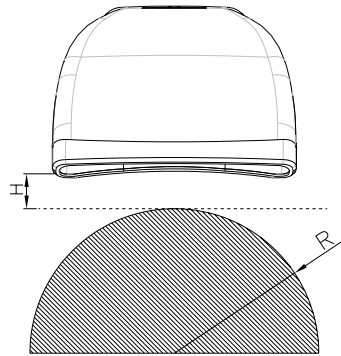
Figure 7: Curvature

Conditions

Barcode Sample: OPTOELECTRONICS Test Sample

Angle: Pitch angle: γ = 0°, Skew angle: β = +0°, Tilt angle: γ = 0°

8. Interface Specifications

8.1. RS-232C Interface

8.1.1. Settings and Communication

Reading the menu barcodes in section 10.1 can set the RS-232C interface default.

Item	[U2] setting
Baud rate	9600 bps
Start/stop bits	1 bit
Data bits	8 bits
Parity bits	No parity
Handshaking	No handshake
Flow control time out	Indefinitely

You can change the communication condition using the menu barcode.

8.1.2. Signal Level

Signal Name	I/O	RS-232C Level (V)	
		Mark/OFF	Space/ON
TxD	OUT	-5 to -15	+5 to +15
RxD	IN	-3 to -15	+3 to +15
RTS	OUT	-5 to -15	+5 to +15
CTS	IN	-3 to -15	+3 to +15

8.1.3. Pin Assignment

Signal	Pin	Notes
NC	1	Open (not connected)
TXD	2	
RXD	3	
---	4	Connected to pin 6 with jumper cable.
GND	5	
---	6	Connected to pin 4 with jumper cable.
CTS	7	
RTS	8	
NC	9	Open (not connected)
FG	SHELL	Shield

Connector: D-sub, 9-pin, Female

Power supply: DC jack, EIAJ voltage Class 2

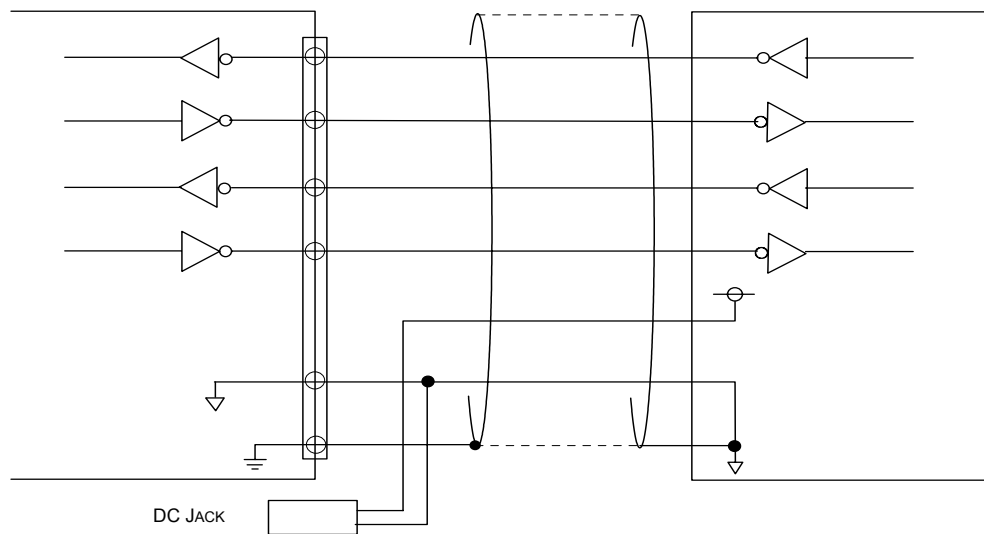### 8.1.4. Interface Circuit

Figure 8: Interface circuit

8.1.5. Character Format

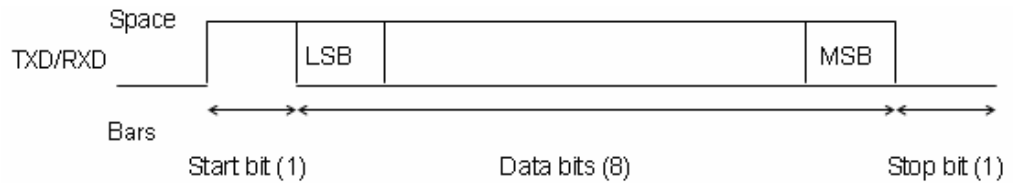Uses the same format for both sending and receiving.

Figure 9:Character format (same for both sending and receiving)
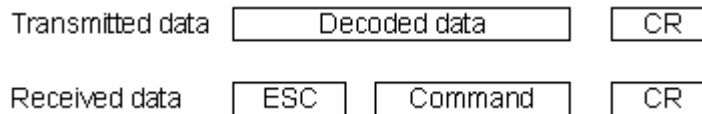
8.1.6. Communication Format

Figure 10: Communication format

8.1.7. Handshaking

Select handshaking options using the menu or command listed below.

Handshaking	Menu/Command
No handshake	P0
BUSY/READY	P1
MODEM	P2
ACK/NAK	P3
ACK/NAK NO RESPONSE	P4

a) No Handshaking

The scanner attempts the communication regardless of the state of the host computer.
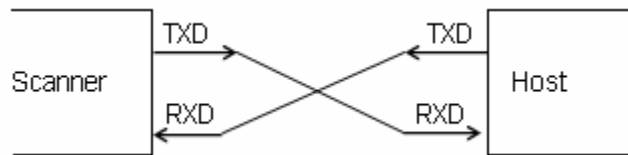

Figure 11: No handshaking

b) No Handshaking

The scanner attempts the communication regardless of the state of the host computer.

Figure 12: No handshaking

c) ACK/NAK

After data has been transmitted, the scanner expects to receive one of the following responses from the host:

ACK response—Action: The scanner completes transmission with the good-read buzzer and returns to the initial state.

NAK response—Action: The scanner sends the data again and waits for the response from the host.

DC1 response—Action: The scanner returns to waiting for the trigger, if it has a trigger (the initial state).

None response—Action: The scanner sounds the error buzzer and returns to the initial state.

ACK/NAK timeout can be set as follows using the menu or commands.

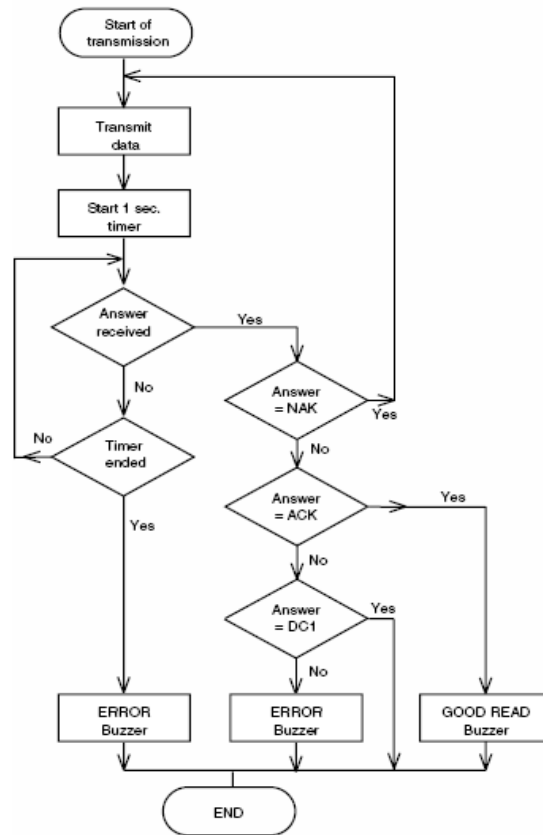| ACK/NAK timeout	Menu / Command
Indefinitely (default)	XI4
100 ms	XI5
500 ms	XI6
1000 ms	XI7

Figure 13: ACK/NAK

d) ACK/NAK NO RESPONSE

When no response from the host is received within the setting time, the scanner assumes an ACK response, and returns to the initial state without the error buzzer. The other actions are the same as ACK/NAK.
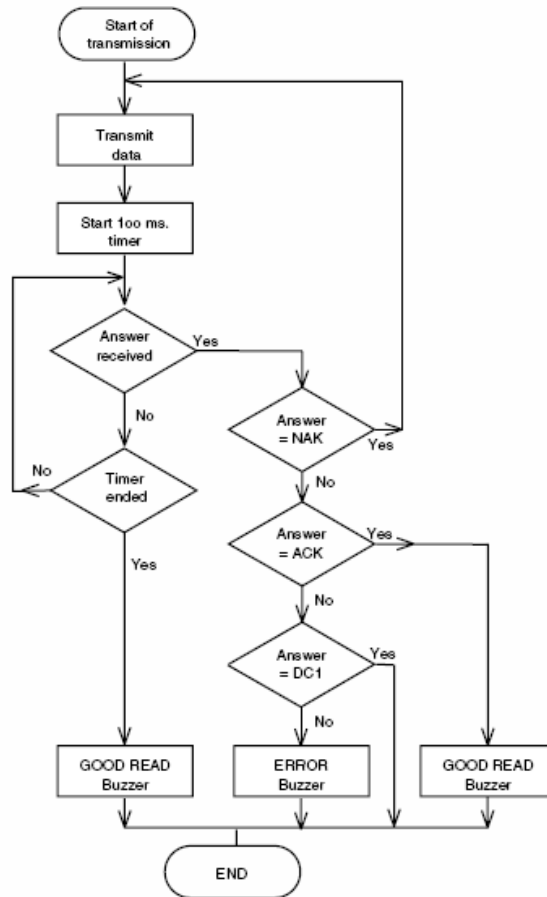

Figure 14: ACK/NAK—No response

8.2. USB-HID and USB-VCP Interface Specifications

8.2.1. Settings

Reading the menu barcodes in section 10.1 can set the USB interface default.
The interface is full-speed USB (12 Mbps).
Note: You must install the USB-VCP driver on the host.

8.2.2. Interface Circuit
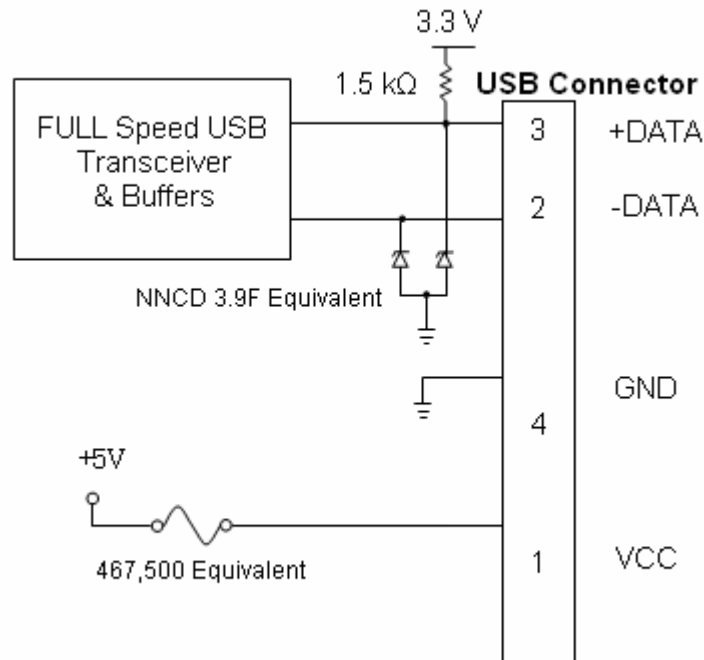
Figure 15: Interface circuit

Do not use the keyboard while the scanner is transmitting the data to the host.
Doing so may cause failure in data transactions.

8.3. DOS/V Wedge Interface Specification

Reading the menu barcodes in section 10.1 can set the DOS/V Wedge interface default.

For either interface (USB or HID/Wedge)—Set the language for the scanner and PC
keyboard to the same language before use; otherwise, the output may not be correct.

9. Cable and Connector

9.1. RS-232C Cable

(Standard specification)

Type:	Straight
Diameter:	Φ4.8 ±0.5 mm
Length:	1500 +50, -0 mm
Cores:	6 insulated wires, 1 conductive wire
Weight:	Approximately 65 g
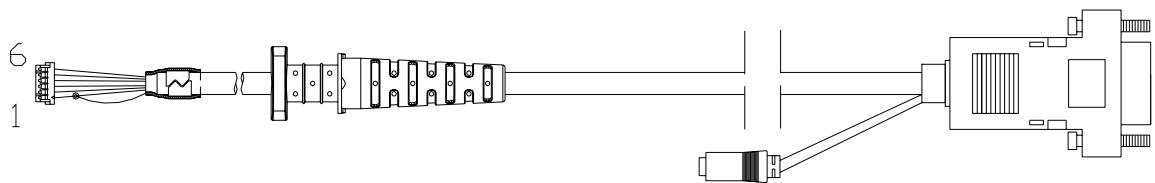
Figure 16: RS-232C cable

9.2. USB Cable

(Standard specification)

Type:	Straight
Diameter:	Φ4.8 ±0.5 mm
Length:	1500 +50, -0 mm
Cores:	4 insulated wires, 1 conductive wire
Weight:	Approximately 50 g
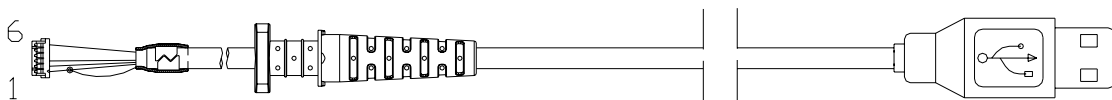
Figure 17: USB cable

9.2.1. Connector

a) USB "A" connector
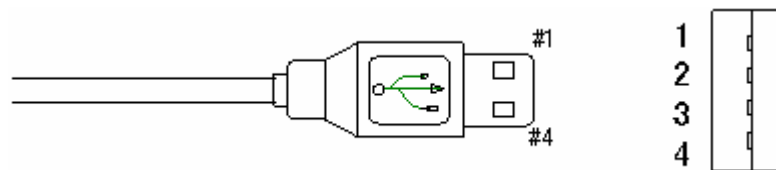
Figure 18: USB "A" connector

9.2.2. Pin Assignment

Pin	Signal
1	VCC
2	-DATA
3	+DATA
4	GND

9.3. Wedge Cable

(Standard specification)

Type:	Y cable
Diameter:	Φ4.8 ±0.5 mm
Length:	1500 +50, -0 mm
Cores:	6 insulated wires, 1 conductive wire
Weight:	Approximately 40 g

(Wedge Y adapter specification)

Type:	Straight
Diameter:	Φ4.8 mm
Length:	250 ±20 mm, -30 mm
Cores:	6 insulated wires, 1 conductive wire
Weight:	Approximately 25 g
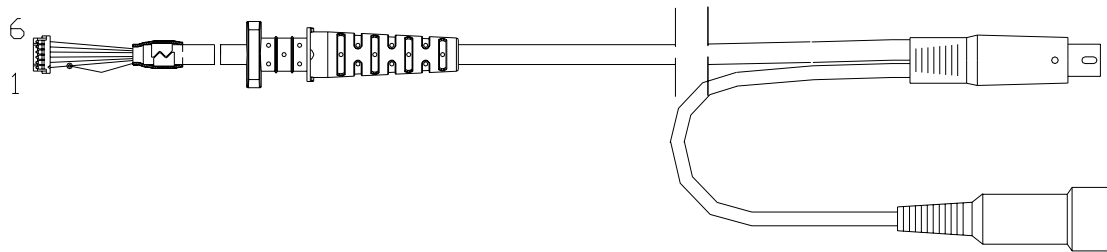
Figure 19: Wedge cable

9.3.1. Connectors

a) DOS/V Host Connector
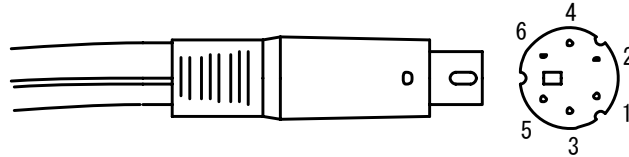
Figure 20: DOS/V host connector

Contact Number	Signal Name
1	CPU_DATA
2	NC
3	GND
4	VCC
5	CPU_CLK
6	NC

b) DOS/V Keyboard Connector
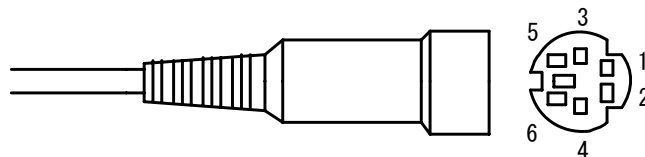
Figure 21: DOS/V keyboard connector

Contact Number	Signal Name
1	KEY_DATA
2	NC
3	GND
4	VCC
5	KEY_CLK
6	NC

Do not use the keyboard while the scanner is transmitting the data to the host. Doing so may cause failure in data transactions.

9.4. Connector Specification (Scanner Side)

CN1 (12-pin)

Pin No	RS-232C	USB	Wedge
1	GND	GND	GND
2	RXD	—	—
3	TXD	—	—
4	CTS	—	—
5	RTS	—	—
6	NC	—	—
7	NC	−DATA	KEY_CLK
8	NC	+DATA	KEY_DATA
9	NC	—	CPU_CLK
10	NC	—	CPU_DATA
11	VCC	VCC	VCC
12	FG (shield)	FG (shield)	FG (shield)

10. Default Settings

10.1. Set Default Interface

Scan the following menu barcodes to return to the default settings.

RS-232C

Functions	Menu labels	Menu codes
SET		ZZ
RS-232C		U2
END		ZZ

USB-HID

Functions	Menu labels	Menu codes
SET		ZZ
USB-HID		SU
END		ZZ

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USB-VCP

Functions	Menu labels	Menu codes
SET	‖‖‖‖ ‖‖ ‖‖‖ ‖‖ (Z Z)	ZZ
USB-VCP	‖‖ ‖‖ ‖‖‖ ‖‖ (C O 1)	C01
END	‖‖‖‖ ‖‖ ‖‖‖ ‖‖ (Z Z)	ZZ

Wedge (with external keyboard)

Functions	Menu labels	Menu codes
SET	‖‖‖‖ ‖‖ ‖‖‖ ‖‖ (Z Z)	ZZ
AT-Wedge	‖‖‖‖ ‖‖‖ ‖‖ ‖‖‖ (U B)	UB
Keyboard layout: with keyboard	‖‖‖‖‖ ‖‖‖ ‖ ‖‖‖ (K M)	KM
END	‖‖‖‖ ‖‖ ‖‖‖ ‖‖ (Z Z)	ZZ

Wedge (without external keyboard)

Functions	Menu labels	Menu codes
SET	‖‖‖‖ ‖‖ ‖‖‖ ‖‖ (Z Z)	ZZ
AT-Wedge	‖‖‖‖ ‖‖‖ ‖‖ ‖‖‖ (U B)	UB
Keyboard layout: without keyboard	‖‖‖‖‖ ‖‖‖ ‖ ‖‖‖ (K L)	KL
END	‖‖‖‖ ‖‖ ‖‖‖ ‖‖ (Z Z)	ZZ

10.2. Default Settings 1: Readable Codes

Symbology	Read	Transmit Code Length	Transmit CD	Calculate CD	Set Prefix	Set Suffix	Other
UPC-A	■	X	■	■	—	CR	
UPC-A Add-on	X	X	■	■	—	CR	
UPC-E	■	X	■	■	—	CR	
UPC-E Add-on	X	X	■	■	—	CR	
EAN-13	■	X	■	■	—	CR	
EAN-13 Add-on	X	X	■	■	—	CR	
EAN-8	■	X	■	■	—	CR	
EAN-8 Add-on	X	X	■	■	—	CR	
Chinese Post Matrix 2of5	X	X	■	X	—	CR	
Codabar / NW-7	■	X	■	X	—	CR	Not transmit ST/SP
Code 11	X	X	X	■	—	CR	
Code 39	■	X	■	X	—	CR	Not transmit ST/SP
Code 93	■	X	X	■	—	CR	
Code 128	■	X	—	■	—	CR	
GS1-128 (EAN/UCC-128)	X	X	—	■	—	CR	
GS1 DataBar (RSS) incl. CC-A/B); Omnidirectional Truncated Limited	X	X	■	■	—	CR	
GS1 DataBar (RSS) incl. CC-A/B); Expanded	X	X	—	■	—	CR	
IATA	■	X	■	X	—	CR	
Industrial2of5	■	X	■	X	—	CR	
Interleaved2of5	■	X	■	X	—	CR	
Korean Postal Code (Code 3of5)	X	X	X	■	—	CR	
Matrix2of5	X	X	■	X	—	CR	
MSI/Plessey	■	X	■CD1	■CD1	—	CR	
S-Code	■	X	■	X	—	CR	
Telepen	■	X	—	■	—	CR	
Trioptic	■	X	—	—	—	CR	Not transmit ST/SP
UK/Plessey	■	X	■	■	—	CR	

Notes:

In the "Reading" column, "■" means "Enable reading" and "X" means "Disable reading."
In the "Transmit code length" column, "■" means "Transmit code length"
and "X" means "Do not transmit code length."
In the "Transmit CD" column, "■" means "Transmit check digit"
and "X" means "Do not transmit check digit."
In the "Calculate CD" column, "■" means "Calculate check digit"
and "X" means "Do not calculate check digit."
"— " means "not supported." In the "Prefix" column, "—" means "there is no prefix setting."

10.3. Default Settings 2: Read Options, Trigger, Buzzer

Item		Default Setting
Setting the number of characters		Fixed length OFF all codes
Read mode		Single read
Multiple read reset time		500 ms
Add-on wait mode		500 ms
Multiple column read		Disable
Redundancy	Default option ([X0] setting)	Read 2 times, redundancy = 1
	Other options ([X1 .. X3] setting) ([BS .. BW] setting)	Read n times, redundancy = n+1 for the following symbologies and lengths: ● Code 11 with length <= 5 ● Code 39 with length <= 5 ● IATA,Industrial 2of5, Interleaved 2of5 with length <= 8 ● Matrix 2of5 (& Chinese Post), Scode with length <= 8 ● MSI/Plessey with length <= 4 ● NW-7 (Codabar) with all lengths
Trigger switch		Enable
Trigger repeat		Disable
Auto trigger		Disable
Read time		2 seconds (when trigger enabled)
Margin check		4/7 of normal
Buzzer duration		50 ms
Buzzer tone		Single tone (3 kHz)
Buzzer loudness		Maximum
Buzzer transmission		Before transmission
Startup buzzer		Enable
Good read LED		Indicator duration 200 ms

11. Serial Number

The serial number shown below is affixed to the scanner.
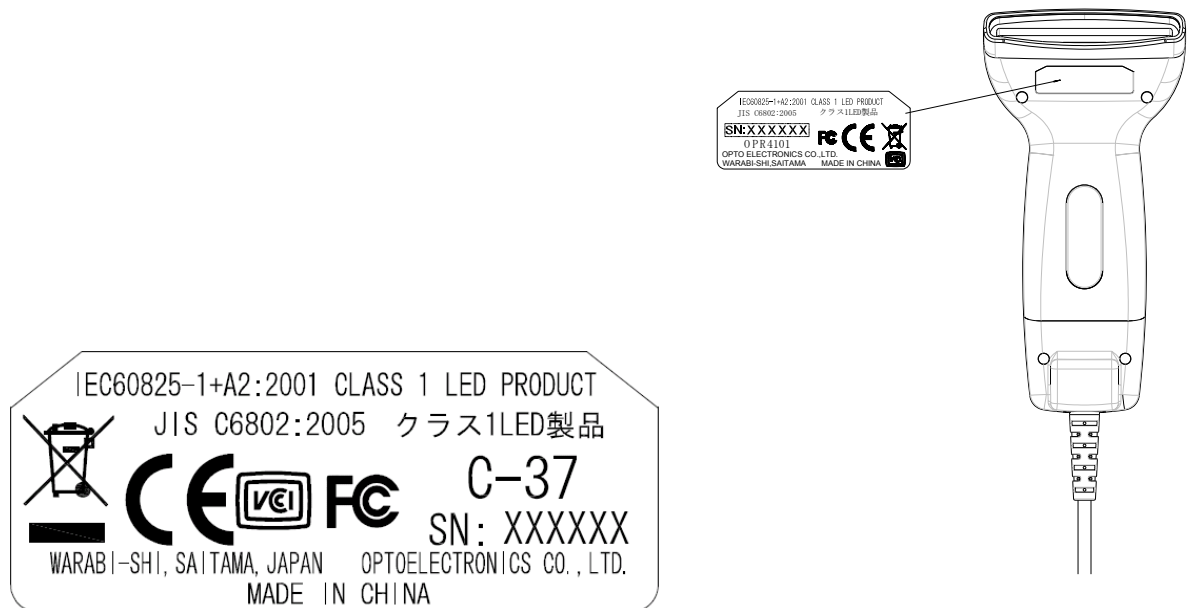
Figure 22: Serial number diagram

12. Packaging Specifications

12.1. Individual Packaging Specification

Put the scanner in a protective foam bag and place it in a single packing box.

Size of the package (after assembly: 245 (W) x 110 (D) x 40 (H) mm

12.2. Collective Packaging

Put 50 individually packaged C37 scanners in a collective packaging box.

Dimensions: 650 mm (W) x 550 mm (D) x 250 mm (H)

Note: The "RO" mark labeled on the package tray or package box guarantees that the applicable product has passed our test of RoHS restrictions compliance (the restriction of the use of certain hazardous substances in electrical and electronic equipment, 2002/95 EC). However, this document does **not** have any legal weight in the European Union.

13. Durability

13.1. Power Line Noise

Immunity: ± 1kV and higher

Conditions

Measurement environment:	Use electrostatic testing device compliant with IEC 61000-4-2
Discharge resistance:	330 Ω
Capacitor charging:	150 pF

13.2. Static Electricity

Air discharge (No malfunction): ±10 kV max.
Air discharge (No destruction): ±15 kV max.
Direct discharge (No malfunction): ±10 kV max.
Direct discharge (No destruction): ±15 kV max.

Contact discharge: ±6kV max.

Conditions

Measurement environment:	Use electrostatic testing device compliant with IEC 61000-4-2 Built up and discharged 15 kV of static electricity on the scanner surface 50 times.
Discharge resistance:	330 Ω
Capacitor charging:	150 pF

13.3. Shock

13.3.1. Drop Test (without packaging)

No malfunction occurred after the following drop test.

Drop Test: Drop the scanner from a height of 150 cm onto a concrete floor three times on each of 5 sides.
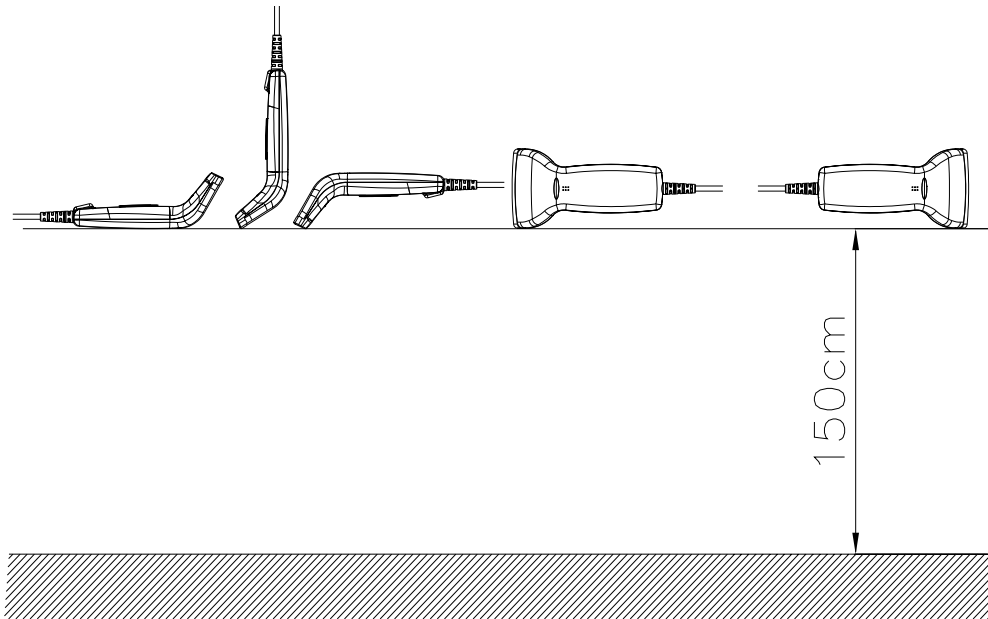

Figure 23: Drop test

13.3.2. Drop Test (with individual packaging)

No malfunction occurred after the following drop test.

Drop Test: Drop the scanner from a height of 150 cm onto a concrete floor on each of one corner, three edges, and six sides (10 drop tests in total)..

13.4. Vibration Strength

No malfunction occurred after the following vibration test.

Vibration test: Increase the frequency of the vibration from 10 Hz to 100 Hz with accelerated velocity 19.6 m/s^2 (2 G) for 60 minutes in non-operating state. Repeat this routine in each X, Y, Z direction once for 60 minutes each.

13.5. Dust and Drip Proof

IEC IP42

13.5.1. Cable Strength

No malfunction occurred after the following pulling test.

Pulling test: Fix the scanner and pull the cable with the force of 2.5 kg (24.5N) for 1 second. Repeat 20 times.

13.5.2. Cable Tail Bending Test

No malfunction occurred after the following bending test.

Bending test: Fix the scanner and attach a weight of 500 grams (4.9N); swing the cable back and forth at an angle of 90°. Repeat it 1,000,000 times.
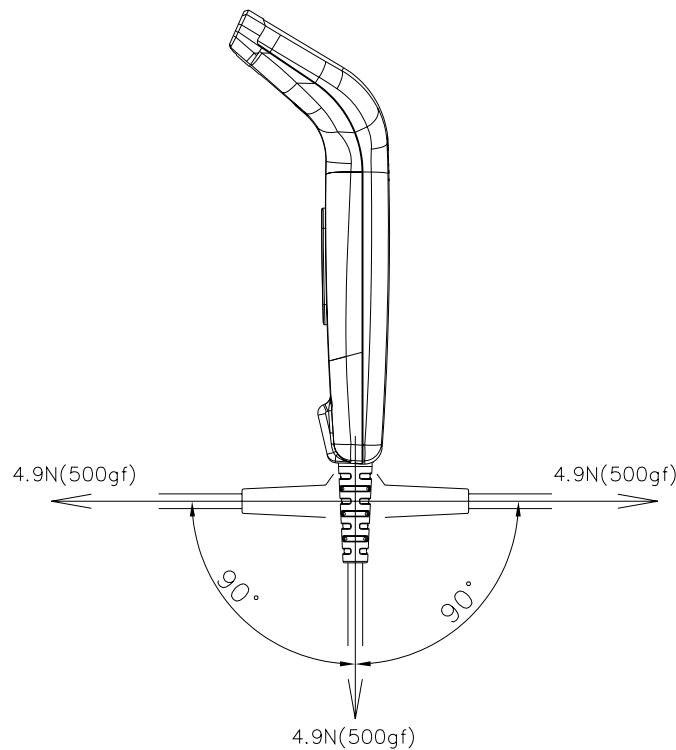

Figure 24: Cable tail bending test

14. Reliability

MTBF (Mean Time Between Failures) of this product is 80,000 hours.

The estimate of MTBF is based on standard operation of the product within the recommended temperature range and without extreme electronic or mechanical shock.

15. Trigger and Read Options

The product has an optional auto trigger setting, which starts barcode reading automatically by using sensor detection. The scanner starts barcode reading after detecting reflection from the surface when the auto trigger is used.

16. Trigger and Read Settings

16.1.1. Enable/Disable Settings

Use the following settings to enable or disable the auto trigger. (Auto trigger is disabled by default).

To enable auto trigger, scan "ZZ", "+I" and "ZZ" in that order.

To disable auto trigger, scan "ZZ", "+F" and "ZZ" in that order.

Functions	Menu labels	Menu codes
SET		ZZ
Enable auto trigger		+I
Disable auto trigger		+F
END		ZZ

Note: Please configure the following **after** enabling the auto trigger.

17. Regulatory Compliance

17.1. LED Safety

The scanner emits light beams.

JIS C6802: 2005: Class 1

IEC 825-1/EN 60825-1: Class 1

17.2. EMC

EN55022

EN55024

VCCI Class B: This is a Class B product, to be used in a domestic environment based on the Technical Requirement of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Please install and use the equipment according to the instruction manual.

FCC Part 15 Subpart B Class B: This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

17.3. RoHS

RoHS: The restriction of the use of certain hazardous substances in electrical and electronic equipment, 2002/95 EC.

18. Safety

Handle this product carefully. Do not deliberately subject it to any of the following.

18.1. Shock

Do not throw or drop the scanner.

Do not drop or put heavy items on this product or its cable.

18.2. Temperature Conditions

Do not use the scanner at temperatures outside the specified range.

Do not use near heat sources such as radiators, heat registers, stoves, or other types of devices that produce heat.

Do not use in areas exposed to direct sunlight for long periods of time.

Do not pinch or forcibly bend the cable, especially at very low temperature.

18.3. Foreign Materials

Do not use the scanner near water or other liquids, as well as in extremely high humidity.

Do not immerse the scanner in liquids.

Do not use in dusty environments.

Do not subject the scanner to chemicals.

Do not insert foreign substances into the device.

18.4. Other

Do not plug/unplug the connectors before disconnecting the power.

Do not attempt to disassemble, modify or update this device.

Do not use near microwaves, medical devices, or RF-emitting devices.

The scanner may not perform properly in environments when placed near a flickering light, such as a computer monitor, television, etc. Do not use in the reach of blinking lights such as CRT.

The scanner may be damaged by voltage drops.

18.5. AC/DC Adapter

Opticon shall not be held responsible for any damages caused by using an AC adapter not provided by Opticon.

Use only the supplied AC adapter with the enclosed region specific plugs for connection to the wall socket.

This product may produce heat when in use, but it does not affect its performance.

19. Mechanical Drawing

Dimensions: 149.5 mm x 74.5 mm x 52.5 mm (except protruding parts)
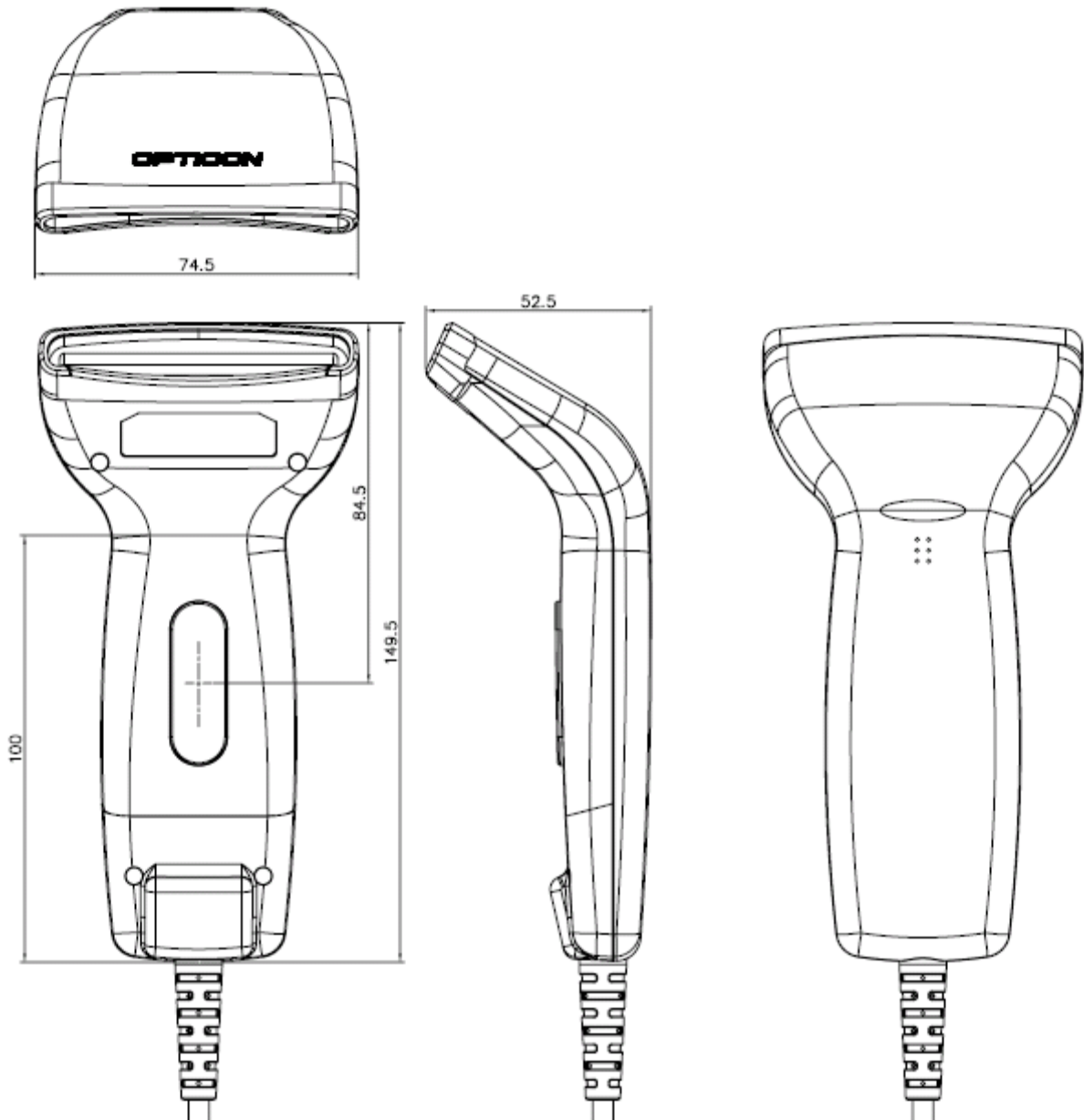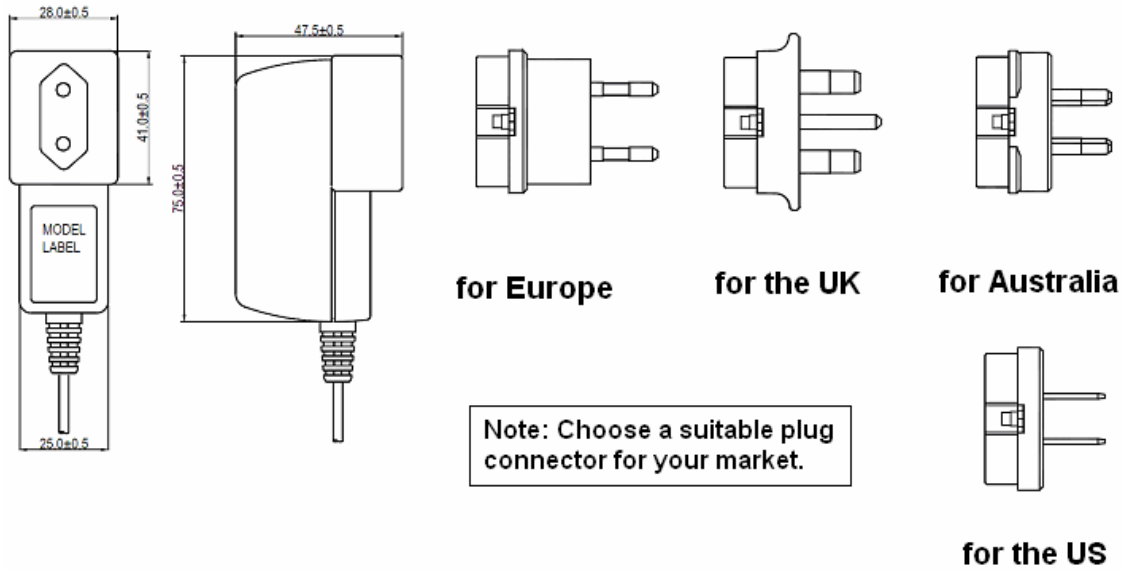

Figure 25: Mechanical drawing Scanner

<AC INPUT>
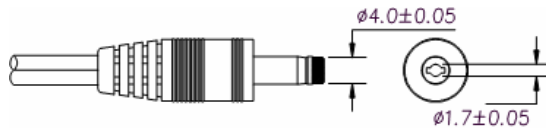Dimensions: 47.5 (W) × 28.0 (D) × 75.0 (H) mm (except protruding parts)
Cable Length: 1.8 m

<DC OUTPUT>

Figure 26: Mechanical drawing AC adapter