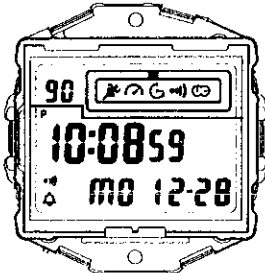
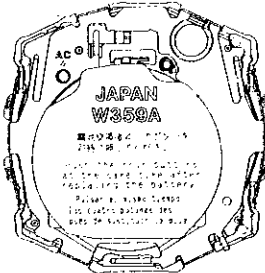


PARTS CATALOGUE/TECHNICAL GUIDE

Cal. W359A

[SPECIFICATIONS]

Item		Cal. No.	W359A
Module			  <p style="text-align: right;">(x 1.2)</p>
Module size	Outside diameter		29.4mm between 6 o'clock and 12 o'clock sides 28.7mm between 3 o'clock and 9 o'clock sides
	Height		5.3mm (5.9mm including the battery portion)
Display medium			Nematic Liquid Crystal, FEM (Field Effect Mode)
Liquid crystal driving system			1/4 multiplex driving system
Display system			<ul style="list-style-type: none"> • Time/calendar display • Tachymeter display • Stopwatch display • Alarm display • Timer display • Dual time display
Additional mechanism			<ul style="list-style-type: none"> • Stopwatch auto start function • Hourly time signal • All segments light-up system • Circuit reset (By pressing four buttons at the same time) • Illuminating light
Loss/gain			Monthly rate at normal temperature range: less than 20 seconds
Regulation system			Nil
Measuring gate by quartz tester			Any gate can be used.
Battery			SEIKO CR2025, Matsushita CR2025 Battery life is approximately 5 years. Voltage: 3.0 V

PARTS CATALOGUE

Cal. W359A

Disassembling procedures Figs. :

① → ⑩

Reassembling procedures Figs. :

⑩ → ①

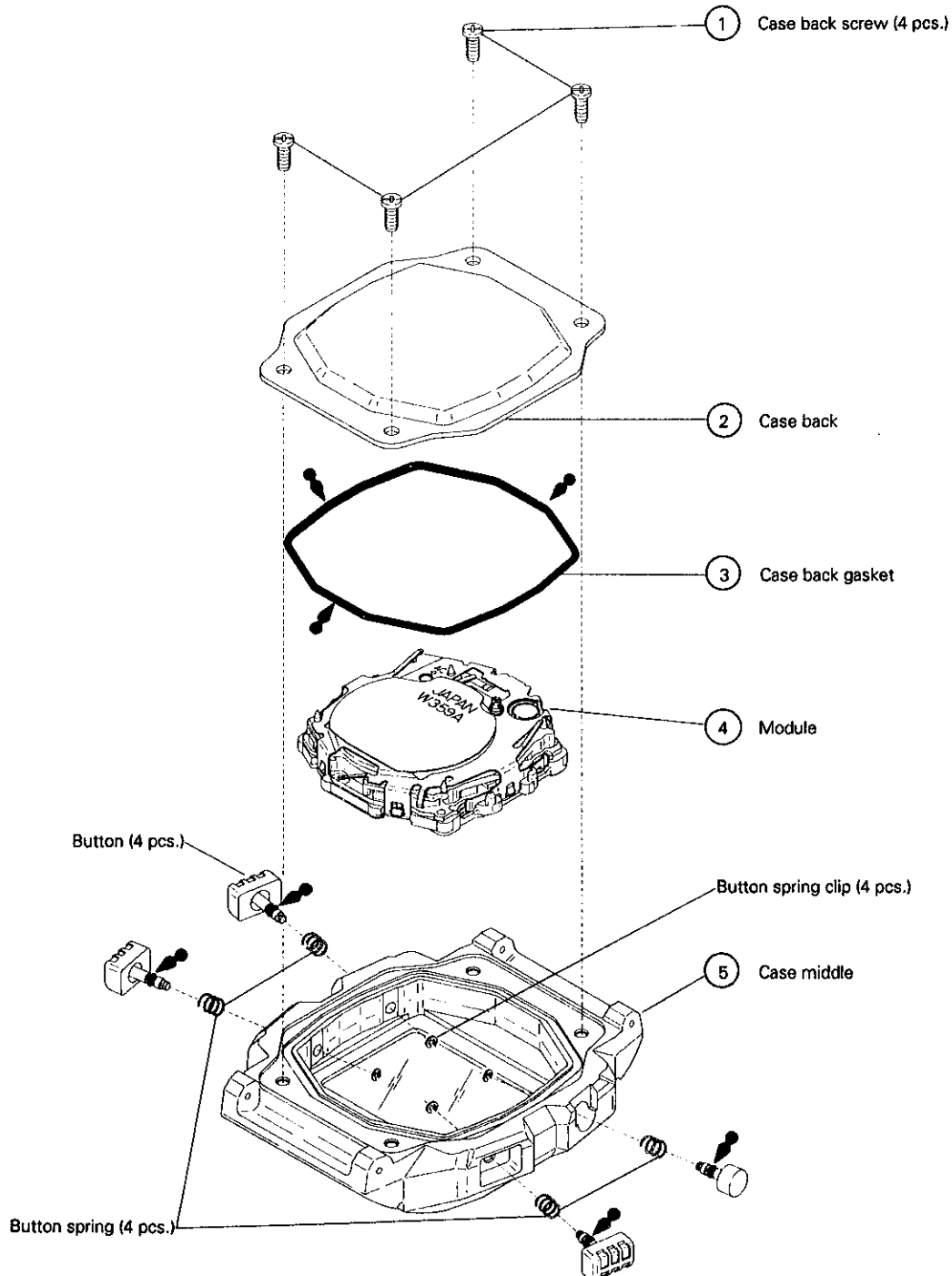
Lubricating:

Types of oil

Oil quantity

● Silicone oil 500,000 c.s.

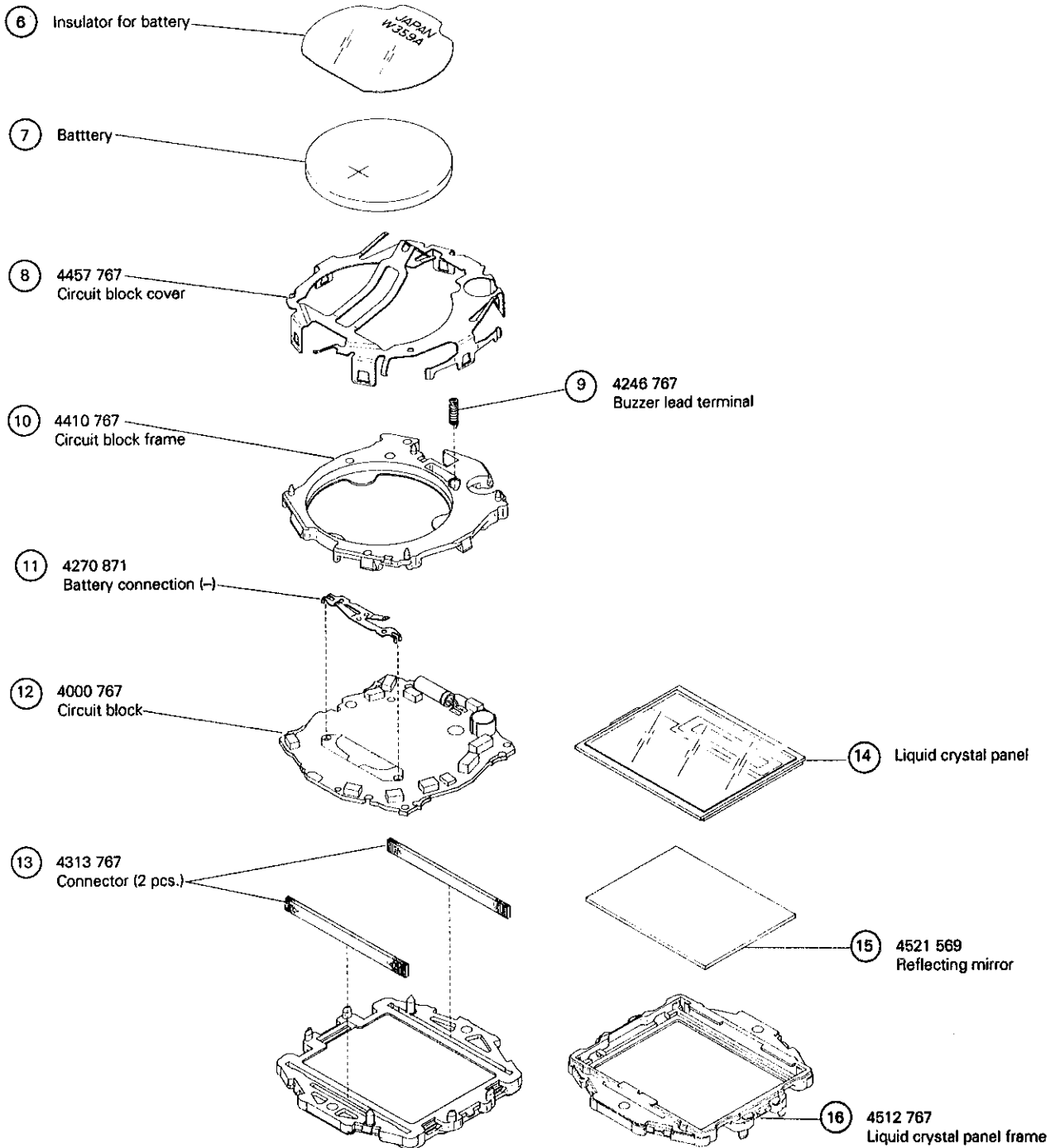
○ Normal quantity



• Other parts
Piezoelectric element 4589 650

PARTS CATALOGUE

Cal. W359A



Remarks:

- After reassembling the liquid crystal panel, reflecting mirror and liquid crystal panel frame, reverse the module to install the parts ⑬~⑥.

○ ➞ Please see the remarks on the following pages.

PARTS CATALOGUE

Cal. W359A

Remarks:

⑥ Insulator for battery

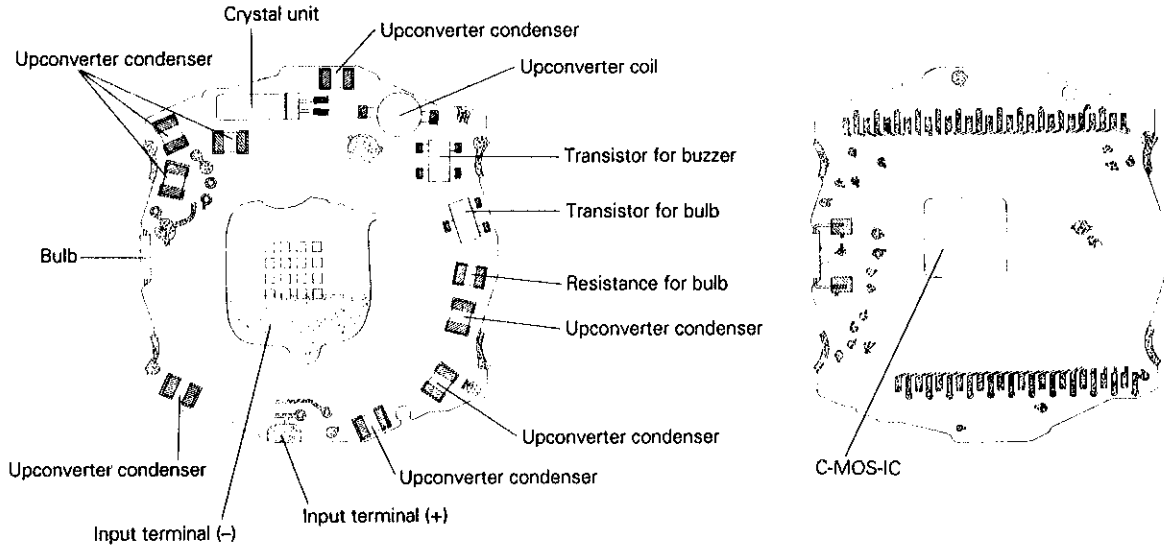
Part No.	4216 760	4216 762
Panel specifications	Standard model	Low temperature model
Operational temperature range for watch mechanism	-5°C ~ 50°C	-20°C ~ 50°C
Marking (Printed on insulator for battery)	W359A JAPAN	W359A JAPAN 1

⑭ Liquid crystal panel

L/C panel No.	Mov't ref. No.	L/C panel color	Mode marks
4510 572	UW35922	Silver	English letters
4510 574	UW35921	Silver	Pictures
4520 570	UW35923	Silver	Pictures (Red graphic display)
4520 571	UW35924	Silver	Pictures (Red mode marks)
4510 573	UW35926	Gold	English letters
4510 593 *	UW35920	Silver	English letters
4510 594 *	UW35925	Gold	English letters

* Low temperature model

I. STRUCTURE OF THE CIRCUIT BLOCK

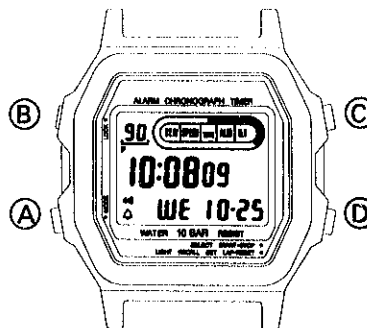
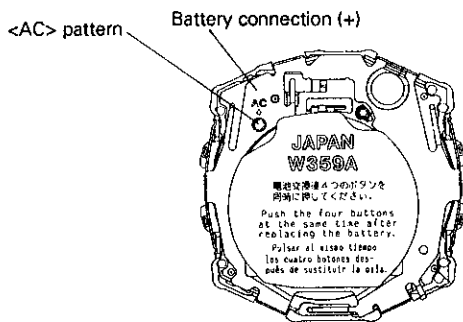


II. REMARKS ON INSTALLING THE BATTERY

- A necessary step after installing the battery

- After the battery is replaced with a new one, be sure to short-circuit the AC terminal and the battery connection (+) with tweezers, or press four buttons (A) (B) (C) and (D) at the same time to reset the circuit. Then, check that the displays will appear as follows:

Time/calendar :	12:00'00" AM Monday, January 1, 1990
Alarm :	12:00 AM Alarm and hourly time signal are disengaged.
Dual time :	12:00 AM
Stopwatch :	Reset to "00" Auto start time is reset to "00'00"
Tachymeter :	Reset to "00" Distance is set to "000.000 km"
Timer :	00:00



Press four buttons at the same time.

- After installing the battery, be sure to reset the insulator for battery in position. Otherwise, the alarm may not ring.

III. REMARKS ON DISASSEMBLING AND REASSEMBLING

⑭ Liquid crystal panel

⑮ Reflecting mirror

⑯ Liquid crystal panel frame

- After reassembling the liquid crystal panel, reflecting mirror and liquid crystal panel frame, reverse the module to install the parts ⑬ ~ ⑥.

IV. VALUE CHECKING

• **Upconverter coil resistance:** $50\Omega \sim 90\Omega$

• **Current consumption**

For the whole of the module : less than $4.0\mu\text{A}$

For the circuit block alone : less than $3.0\mu\text{A}$