

TIMELAB Develops OEM/ODM Hair Straightener Platform Reaching 200°C at Three Points in 15 Seconds

Testing at 230 V with a 260°C setting confirmed temperatures of at least 200°C at all three measured plate locations after 15 seconds.

YOKOHAMA, Japan — TIMELAB Co., Ltd., a Japanese beauty-appliance OEM/ODM provider, has developed a hair straightener platform for international hair care brands and professional markets. In testing at 230 V with a 260°C setting, all three measured plate locations reached at least 200°C after 15 seconds.

Three-Point Plate Testing

A European-market development unit with a maximum setting of 260°C was tested at 230 V. Fifteen seconds after power-on, readings at the front, center and rear were 212.5°C, 227.5°C and 200.0°C, respectively. From around 60 seconds onward, temperature differences among the three points narrowed, indicating a stable trend.

Testing documented heat-up performance at three measured locations on the plate.

Precision Temperature Control

An NTC sensor inside the metal ceramic heater (MCH) detects temperature. A microcontroller (MCU) reads the signal and adjusts heater output. Upper and lower MCH heaters are controlled independently, supporting stable temperatures after rapid heat-up.

Five Protection Functions

The development unit incorporates:

1. A 6.3 A fuse for short-circuit or overcurrent protection
2. Automatic power shutoff above 270 V AC
3. Automatic power shutoff below 85 V AC
4. First-stage overheat protection if plate temperature exceeds 280°C
5. Second-stage overheat protection through a 300°C thermal protection switch

OEM/ODM Customization

TIMELAB customizes design, plate shape, materials, surface treatment, temperature settings, voltage and plugs. It welcomes inquiries from international brands, manufacturers and distributors.

Note: Temperature data are factory reference values from a development unit tested at 230 V. Results may vary depending on operating conditions, supply voltage, measurement method and individual unit variation. The 260°C maximum applies to the European-market specification. Final specifications, inspection criteria, standards and certifications will be determined in accordance with destination-market regulations and agreed requirements.

About TIMELAB

TIMELAB provides integrated OEM/ODM services for hair straighteners, hair dryers and beauty devices, from planning through production and inspection.

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