Charging for CTL series

■ Charging circuits

Charging / discharging cycle	Approx. 500 times at 100% discharge depth to nominal capacity
Charging system	Constant-voltage charging (Please strictly adhere to the specified charge voltage)
Operating temperature	-10℃ to +60℃

*Consult with Panasonic Energy concerning constant-current charging systems.

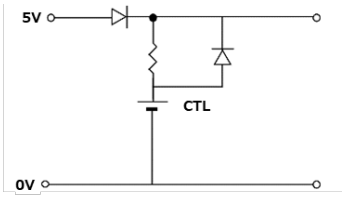
The charging circuit is crucial in terms of ensuring that full justice will be done to the battery characteristics.

Consider it carefully as the wrong charging circuit can cause trouble.

■ Precautions regarding the charge voltage setting

Under no circumstances should trickle charging, which is used for nickel-cadmium batteries, be used.

Ignoring this precaution will cause the battery voltage to rise to about 5V, resulting in a deterioration of performance.



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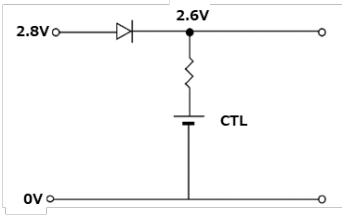

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■ Charge voltage range

If a fixed-charging method is applied, please adhere to the specified charging voltage.

Guaranteed voltage is 2.5V to 2.7V at the temperature of -10 °C to +60°C.

*If the charging voltage exceeds the specifications, the internal resistance of the battery will rise and may cause battery deterioration. Also, with a charge voltage around 4V, corrosion of the (+) terminal (case) may occur, causing leakage.

*It is not possible for the battery capacity to recover completely when the charging voltage is below the specification.

■ Recommended charging circuits

● Basic conditions

Fixed-voltage charge

Charge voltage: 2.5 to 2.7V (Standard voltage: 2.6V)

Charge current: For a battery voltage of 2.5V

CTL621F Approx. 0.63mA or below

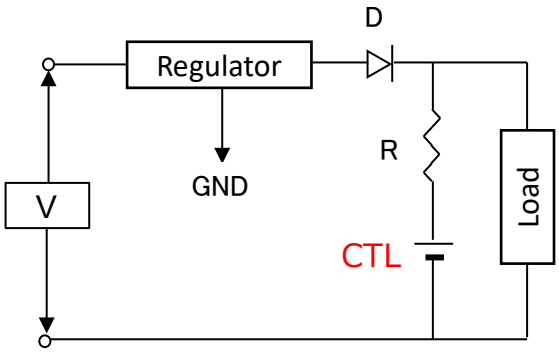
CTL920F Approx. 1.0mA or below

CTL1616 Approx. 2.0mA or below

■ Mixed usage of batteries

Do not use these batteries and primary lithium batteries or other rechargeable batteries together, and do not use new batteries and old batteries together even if they are of the same type.

Example of Charging Circuits for CTL series



Standard Circuit

Diode D: RB751VM-40

Model	Reg.	R
CTL621F	2.7V	160Ω
	2.8V	320Ω
CTL920F	2.7V	100Ω
	2.8V	200Ω
CTL1616	2.7V	51Ω
	2.8V	100Ω