



Measuring the CCD position through filter

OUTLINE / PREVIOUS

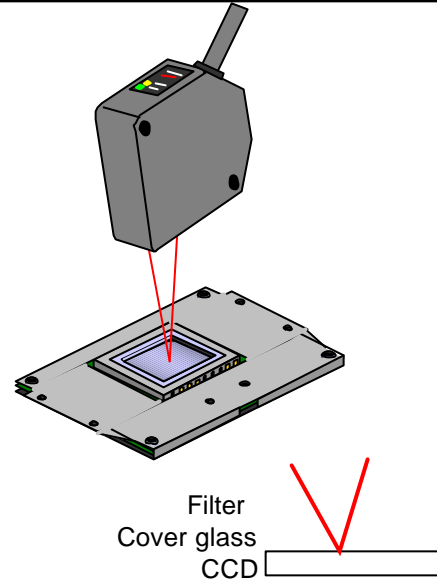
Customer: Camera manufacturer
Process: CCD measurement process

A CCD (Charge Coupled Device) of a digital single lens reflex camera is measured.

PROBLEM

Competitor's laser sensor is used; however, stable measurement of CCD cannot be achieved when filter type changes. Measurement of CCD is required to be stable even with filter and cover glass between.

SOLUTION



MODEL / HOW TO

HL-C203F HL-C2C HL-C2F01

Measurement on specular reflective mode. ND filter **HL-C2F01** is used to attenuate reflected light intensity. Set Measurement Surface Reference to Far.

BENEFIT 1 Highly accurate

HL-C203F is a displacement sensor with performance of sampling 100kHz, linearity $\pm 0.03\%$, resolution (*) $0.025\mu\text{m}$, the CCD surface can be accurately measured not influenced by reflection from filter or cover glass. * **HL-C203FE** is not subject to control, whose resolution is $0.25\mu\text{m}$ (used in combination with controller **HL-C2CE**).

BENEFIT 2 ND filter

ND filter **HL-C2F01** brings higher precision measurement by reducing the amount of laser light to an appropriate level when the amount of reflected light is large in the specular reflective mode.

BENEFIT 3 Measurement surface reference (Far setting)

Before measuring a transparent object, select the measurement surface reference from "Near Setting (counting the layer of the measurement surface which is set at "Output selection" from the nearest surface to the farthest surface)" or "Far setting (counting the layer from the farthest surface to the nearest surface)". In this application, Far setting brings stable detection, because the CCD surface which is farthest from the sensor head is measured.