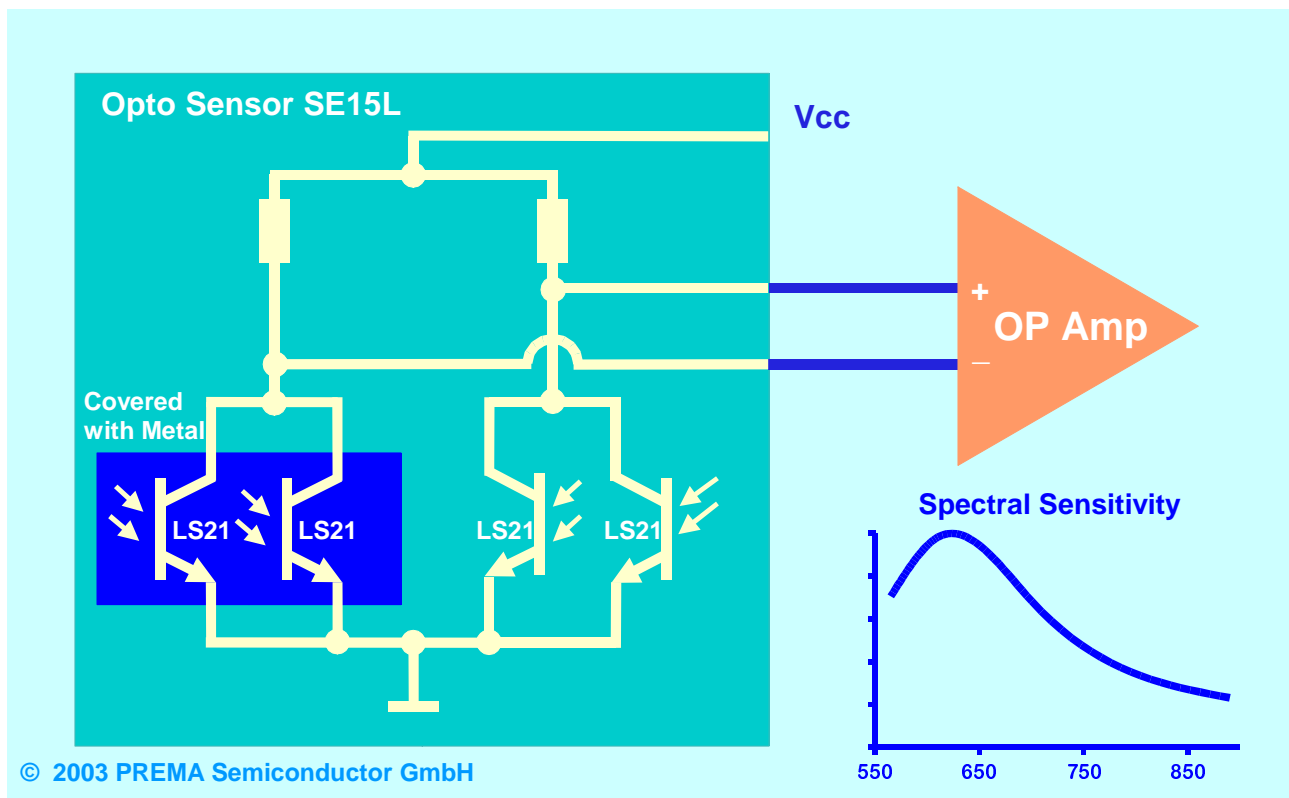


Sensitive Photo Transistors for Visible Light

Highly sensitive photo transistors for visible light are now available with the ModuS U6 high voltage process developed by PREMA Semiconductor. No additional process layers are necessary for these transistors that can, moderately priced, be integrated into mixed-signal ASICs. The spectral sensitivity of the super beta photo transistor LS21 at 610 nm is about 540 A/W, the LS31 based on a standard transistor offers a sensitivity of 70 A/W. Both photo transistors are very linear over a wide illumination range.

The light sensor SE15L with compensated dark current consists of four super beta phototransistors LS21 combined to a differential stage. The transistors are placed in a quad split order to optimize the matching properties.



Two transistors arranged in a diagonal are covered with metal. This differential stage amplifies the light current minus the dark current. An illuminance smaller than 1 Lux can be detected with the SE15L even at a chip temperature of 120° C. The photo transistors LS21 and LS31 and the light sensor SE15L are prepared to be used in a custom-specific IC (ASIC) developed for the specific demands of a customer.

For more information please visit our web site www.prema.com .