

Operational description VTag

Power and Current Consumption

1. Transmission power

Each SESimagotag Electronic Shelf Label has a transmission power of ≤ 10 dBm (according to the FCC certification).

2. Description for labels with e-ink display

The SESimagotag Electronic Shelf Label uses a Panchip PAN107B, controller (MCU) with integrated radio for processing and radio transmission. An e-ink display is connected to the MCU over an SPI interface. Additionally, an external flash memory is connected over an SPI interface, if external storage is required for the product format (depending on display size and MCU).

The internal clocks are generated by two external Crystals. RF transmission frequencies are generated by 48 MHz (PAN107B) crystal respectively 32.768kHz, whereas the 32.768kHz crystal is used for low power timing.

Radio transmission is done with MSK modulation with a data rate of 250 kBit/s (250 kHz bandwidth) in a frequency range of 2.4 GHz ... 2.483 GHz with a transmission power of less than 10 dBm.

The device uses a white LED, product variants with an RGB LED or without LED are available. When an LED is equipped, an additional boost converter is assembled to generate the LED supply voltage (up to approx. 3.8V) which is typically higher than the board-voltage (max. 3.4V)

This electronic shelf label contains a passive NFC tag, which allows custom functions depending on the current use-case equally to use it for your own developed application and / or redirection / forwarding to a specific URL. In addition to this, a mobile application can extract label ID information from the NFC tag. Based on the label ID, the application can receive further details about the matched article. The NFC tag (NTAG I²C plus family by NXP) is passive and communicates with a host via load-modulation. The passive NFC-interface requires to be supplied by an NFC field (e.g.

NFC enabled device) always to be able to receive appropriate commands and send the related responses. No active NFC field is generated at any given moment.

V300 3.5x BWRY

Technical Details

Model	EDG6-0351-B
Dimensions (mm)	93.9 x 48.6 x 11.5 (without LED and Easylock)
Display technology	Full graphic E Ink display
Active display area (mm)	74.7 x 38.0
Resolution (pixels)	456 x 232
Pixel density	155 DPI
Native pixels colors	
Intelligent pixel color combination via Studio©	
Viewing angle	Nearly 180°
Usable pages	4
Label updates/hour/AP (CE/FCC)	3600/2100
Operating temperature	0°C to 40°C
Battery	3 x CR2450
Battery Lifetime*	Up to 15 years
Encryption	128-bit AES
Compliance	CE, RoHS, FCC/IC
Wireless connectivity	Direct NFC
LED	No LED or 1x White + 1x RGB LED
ESL operating frequency	2.400-2.480 GHz, maximum EIRP ≤ 10 mW
Wireless firmware update	Yes
Packaging unit	60 labels/box



Technical Drawings

