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Dust Sensor Unit



★Under development

| Output         | Features                                                                                                                               | Model No.                    |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Analog output  | Pulse analog output, single-shot detection of house dust, general purpose                                                              | <a href="#">GP2Y1010AU0F</a> |
|                | Pulse analog output, single-shot detection of house dust, high sensitivity                                                             | GP2Y1012AU0F                 |
| Digital output | Digital (PWM) output, built-in microprocessor controller, single-shot detection of house dust, high sensitivity                        | GP2Y1023AU0F                 |
|                | Digital (UART) output, built-in microprocessor controller, sensing can discriminate between PM2.5 and PM10, internal cleaning possible | ★GP2Y1030AU0F                |

(Ta = 25°C)

| Model No.                                                                     | Features                                                                                                                                                                                                             | Topr (°C)  | Operating supply voltage (V) | Electro-optical characteristics |                                                         |                                                             |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------------|---------------------------------|---------------------------------------------------------|-------------------------------------------------------------|
|                                                                               |                                                                                                                                                                                                                      |            |                              | Dissipation current (mA)        | Detection concentration $\mu\text{g}/\text{m}^3$ (TYP.) | Output                                                      |
| GP2Y1010AU0F<br><a href="#">Datasheet</a><br><a href="#">Application Note</a> | •Built-in infrared emitting diode, photodiode and signal processing circuit<br>•Compact, single-shot detection of house dust<br>•Output: Analog voltage                                                              | -10 to +65 | 4.5 to 5.5                   | TYP. 11                         | 0 to 600                                                | Analog voltage                                              |
| GP2Y1012AU0F                                                                  | •High sensitivity<br>•Built-in infrared emitting diode, photodiode and signal processing circuit<br>•Compact, single-shot detection of house dust<br>•Output: Analog voltage                                         |            | 4.5 to 5.5                   | TYP. 11                         | 0 to 240                                                | Analog voltage                                              |
| GP2Y1023AU0F                                                                  | •High sensitivity<br>•Built-in microcomputer<br>•Built-in infrared emitting diode, photodiode and signal processing circuit<br>•Compact, single-shot detection of house dust<br>•Output: Digital signal output (PWM) |            | 4.75 to 5.25                 | TYP. 15                         | 0 to 240                                                | Digital signal (PWM)<br>Temperature correction<br>Averaging |
| ★GP2Y1030AU0F                                                                 | •Built-in infrared emitting diode, photodiode and signal processing circuit<br>•Built-in microcomputer<br>•Sensing can discriminate between PM2.5 and PM10<br>•Internal cleaning possible                            |            | 3 to 5.5                     | TYP. 25                         | 0 to 500                                                | Digital signal (UART)                                       |



GP2Y1010AU0F  
(GP2Y1012AU0F, GP2Y1023AU0F)



GP2Y1030AU0F

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