

### 2.2.4.2 Measurement registers

The camera has a list of measurement ranges (called gain modes) which you can inspect through these registers. You can also make the camera switch to one of them using the SensorGainMode register.

Temperature (in Kelvin) =  $B / \log(R / (S - O) + F)$ , where S is the 14-bit digital signal value.  $\log(x)$  is the base-e logarithm of the x parameter.

Name	Type	Access	Comment
SensorGainMode	Enum	RW	Dynamic range control mode. 1=Low gain mode (lower sensitivity), high temperatures. 2=High gain mode for lower temperatures (< 100 deg Celsius)
R	Integer	RW	Gets and sets the Planck R constant. This value is used when converting from signal value to temperature.
B	Float	RW	Gets or sets Planck B constant. This value is used when converting from signal value to temperature. Value range 1300 - 1600.
F	Float	RW	Gets or sets Planck F constant. This value is used when converting from signal value to temperature. Value range 0.5 - 2.
O	Float	RW	Gets and sets Planck O (offset) constant. This value is used when converting from signal value to temperature.
Spot	Float	RO	Center spot meter in degrees Celsius.
LensNumber	Enum	RW	Gets or sets the active lens (which affects which correction terms are applied) 0=Lens type 0 (default) 1=Lens type 1
LensSelector	Enum	RW	Selected lens (0 - 1)
FNumber	Float	RW	Selected lens F number (focal ratio), 0.5 - 8.0
Transmission	Float	RW	Selected lens transmission factor, 0.5 - 1.0

### 2.2.4.3 Object Parameter registers

Registers associated with infrared measurement conditions.