



LIST OF CALIBRATION COEFFICIENTS - EXAMPLE

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EQUATIONS

TEMPERATURE EQUATION

$$T = T_{S1} \left(\frac{\lambda_{T,act} - \lambda_{T,ref}}{\lambda_{T,ref}} \right)^2 + T_{S2} \left(\frac{\lambda_{T,act} - \lambda_{T,ref}}{\lambda_{T,ref}} \right) + T_{S3}$$

Measurand	Description
T [°C]	Temperature
$\lambda_{T,act}$ [nm] **1	Actual temp. wavelength
$\lambda_{T,ref}$ [nm]	Reference temp. wavelength
T _{S1} [°C]	Temperature sensitivity 1
T _{S2} [°C]	Temperature sensitivity 2
T _{S3} [°C]	Temperature sensitivity 3

STRING EXPRESSION

Ts1*((λT,act-λT,ref)/λT,ref)^2+Ts2*((λT,act-λT,ref)/λT,ref)+Ts3

**1 Measured value during monitoring of the sensor

CALIBRATION COEFFICIENTS

Nr.	Serial number	FBG	Product	T _{S1} [°C]	T _{S2} [°C]	T _{S3} [°C]	$\lambda_{T,ref}$ [nm]
1	198136/0001		TPA-01; WL1548,9nm; 2x FCAPC; LCP-01: 2x 1mtr	-2477681,366	52786,19076	22,50476755	1548,514494
2	198136/0002		TPA-01; WL1548,9nm; 2x FCAPC; LCP-01: 2x 1mtr	-2569888,019	53819,29229	22,50525754	1548,477574
3	198136/0003		TPA-01; WL1548,9nm; 2x FCAPC; LCP-01: 2x 1mtr	-2311030,106	53588,17046	22,5027883	1548,633785