

## **SITK™ Error and Warning codes and definitions**

### **ERRORS**

#### **General Errors (5000-5499)**

- 5000 No Device Found for the handle type
- 5001 Invalid Device ID
- 5002 Unsupported Function
- 5003 Unavailable Sequence
- 5004 Invalid Sequence Handle
- 5005 The Function called failed in device dll
- 5006 Parameter ID is out of range for given class
- 5007 Parameter ID is not supported for the device
- 5008 Parameter ID is not available for the device
- 5009 Index out of range.
- 5010 Device Object could not be created
- 5011 Message not found for this error code
- 5012 Maximum number of objects in use
- 5013 Data handle passed was invalid.
- 5014 X dimension out of bounds.
- 5015 Y dimension out of bounds.
- 5016 Z dimension out of bounds.
- 5017 Enumerated value is not defined
- 5018 Internal error: Invalid data type.
- 5019 Internal error
- 5020 Data Type requested is not supported for the operation
- 5021 Software will assume 1 frame (Warning)
- 5022 Index used is out of range.
- 5023 Attempt to delete an already deleted object
- 5024 Port is Invalid
- 5025 Port Open Failed (COM,USB,GPIB,etc.)
- 5026 Port Write Failed (COM,USB,GPIB,etc.)
- 5027 Port Read Failed (COM,USB,GPIB,etc.)
- 5028 Port Reset Failed
- 5029 Port Set Value Failed
- 5030 Port Get Value Failed
- 5031 Wrong Create for Port Type
- 5032 Port Type Not Supported
- 5033 Error Reading INI File
- 5034 Parameter Value is out of range for given ID
- 5035 No License File
- 5036 Invalid License File
- 5037 Mac address does not match that in license file
- 5038 Software error occurred internally to Parameter ID function
- 5039 Parameter ID Value Error
- 5040 General timeout error

5041 Data Type for the Parameter ID is not supported  
5042 No Device Available  
5043 A required accessory DLL was not found  
5044 Handle for use with accessory DLL is not valid  
5045 Named Device not found  
5046 Device Type not defined  
5047 Device not selected  
5048 Device Index out of range  
5049 Device not supported  
5050 Device not opened  
5051 X, Y, or Data Type in receiving structure does not match sending structure  
5052 Command to device or software returned an error  
5053 Data Type out of range  
5054 Device Handle is 0 or otherwise invalid  
5055 Array (or string) too small or too large  
5056 Invalid Parameter (e.g. NULL pointer)  
5057 Array of calibration points to set is not defined  
5058 Number of calibration points to set must match dimension of data structure  
5059 No calibration data in data structure  
5060 Software could not allocate buffer  
5061 Data must be present before calibration is set  
5062 Sequence handle error (usually occurs on Open)  
5063 Sequence attach error  
5064 Sequence Open error  
5065 Internal array is of invalid size  
5066 NI Data Type not supported  
5067 NI Data Size is different than software (for copy)  
5068 Parameter cannot be read  
5069 Allocation error  
5070 Dongle key version is invalid

**Camera specific errors (5500-5999)**

5500 Internal software error in cameras  
5501 Camera Open failed  
5502 Trigger mode selected is not supported by camera  
5503 Min Blocks are not supported by camera (Warning)  
5504 Number of Min Blocks are not supported (Warning)  
5505 Strips per clear not supported by camera (Warning)  
5506 Continuous Clears is not supported by camera (Warning)  
5507 Clear Cycles not supported by camera (Warning)  
5508 Strips per clear AND Continuous Clears not supported by camera (Warning)  
5509 Strips per clear AND Clear Cycles not supported by camera (Warning)  
5510 Continuous Clears and Clear Cycles not supported by camera (Warning)  
5511 Clears Setup not supported by camera (Warning)  
5512 Shutter Open Mode not supported by camera (Warning)  
5513 Shutter Close Delay not supported by camera (Warning)

5514 Shutter Open Delay not supported by camera (Warning)  
5515 Shutter Open Mode and Open Delay not supported by camera (Warning)  
5516 Shutter Open Mode and Close Delay not supported by camera (Warning)  
5517 Shutter Open and Close Delays not supported by camera (Warning)  
5518 No shutter options are supported by camera (Warning)  
5519 Shutter Gate Mode not supported by camera (Warning)  
5520 Intensifier Gain not supported by camera (Warning)  
5521 Shutter Gate Mode and Intensifier Gain not supported by camera (Warning)  
5522 Trigger Mode not supported by camera (Warning)  
5523 Edge Trigger not supported (Warning)  
5524 Trigger Mode and Edge Trigger not supported by camera (Warning)  
5525 ID type used by Set or Get not supported by camera (Warning)  
5526 Temperature not supported by camera (Warning)  
5527 ADC Speed Index not supported by camera (Warning)  
5528 ADC Gain Index not supported by camera (Warning)  
5529 ADC Speed Index and Gain Index not supported by camera (Warning)  
5530 ADC Offset not supported by camera (Warning)  
5531 ADC Offset and Speed Index not supported by camera (Warning)  
5532 ADC Offset and Gain Index not supported by camera (Warning)  
5533 ADC Offset and Gain Index and Speed Index not supported by camera (Warning)  
5534 FIFO Overflow  
5535 Communication Error  
5536 Data Transfer Failed  
5537 No Communications Link  
5538 PVCam Invalid Script  
5539 Extra Data  
5540 Attempt was made to set a read only Parameter ID  
5541 Parameter value caused error  
5542 No output device available on camera  
5543 No input or output device at address specified  
5544 Fast Frame Accumulation Mode not supported by camera (Warning)  
5545 Fast Frame Number of Accumulations not supported by camera (Warning)  
5546 Fast Frame not supported by camera  
5547 Fast Frame Paired not supported by camera (Warning)  
5548 Error setting temperature  
5549 Temperature to Set is greater than maximum (Warning)  
5550 Temperature to Set is less than minimum (Warning)  
5551 No Controller Object  
5552 I/O Devices not supported by camera  
5553 Invalid Region of Interest (ROI) Dimension  
5554 Data is out of range for operations  
5555 Illegal cosmic ray parameter  
5556 Data collection error occurred at low level  
5557 Camera Not Found  
5558 Camera Initialize Failed  
5559 Error setting cooling mode

5560 Error reading cooling mode  
5561 Uneven X binning  
5562 Uneven Y binning  
5563 Uneven Digital X binning  
5564 Uneven Digital Y binning  
5565 X range out of bounds with camera  
5566 Y range out of bounds with camera  
5567 Fan control not supported by camera (Warning)  
5568 Cooling head not supported by camera (Warning)  
5569 Cooling mode not supported by camera (Warning)  
5570 Logic Output not supported by camera (Warning)  
5571 Inverted Logic Output not supported by camera (Warning)  
5572 Clear Mode not supported by camera (Warning)  
5573 Actual Gain not supported by camera (Warning)  
5574 Read Noise not supported by camera (Warning)  
5575 Onboard Post Processing not supported by camera (Warning)  
5576 Camera Feature Index out of range  
5577 Camera Set Parameter failed  
5578 Camera Feature Name not available (Warning)  
5579 Camera Feature Parameter Index out of range  
5580 Camera Parameter Name not available (Warning)  
5581 Camera Function not supported  
5582 Enable Gain not supported by camera (Warning)  
5583 Gain Multiplier not supported by camera (Warning)  
5584 Camera Get Parameter failed (Warning)  
5585 Intensifier Exposure not supported by camera (Warning)  
5586 Exposure not supported by camera (Warning)  
5587 Red Exposure not supported by camera (Warning)  
5588 Blue Exposure not supported by camera (Warning)  
5589 Intensifier Gain DB not supported by camera (Warning)  
5590 Invalid Frame Size  
5591 EM Mode not supported by camera (Warning)  
5592 EM Locked not supported by camera (Warning)  
5593 EM Gain Value 10 not supported by camera (Warning)  
5594 EM Gain Value 20 not supported by camera (Warning)  
5595 EM Gain Value 40 not supported by camera (Warning)  
5596 EM Gain not supported by camera (Warning)  
5597 No serial number on camera  
5598 Old camera system drivers found (Warning)  
5599 Color Wheel not supported by camera (Warning)  
5600 Data Overrun  
5601 Camera Not Initialized  
5602 Internal Handle Error  
5603 Not Enough Memory  
5604 Invalid Acquisition Buffer  
5605 Internal Pointer Error

5606 Camera is already Opened by another Application  
5607 Camera is Disconnected  
5608 Readout Port not supported by camera (Warning)  
5609 EM Gain Value 20 not supported by camera (Warning)  
5610 EM Gain Value 40 not supported by camera (Warning)  
5611 Kinetics Trigger Response Error  
5612 Kinetics Window Height Error  
5613 Kinetics Invalid Readout Mode  
5614 Kinetics Trigger Response Error  
5615 Kinetics Window Height Error  
5616 Kinetics Readout Mode Error  
5617 Kinetics ROI Error  
5618 Invert Logic Output Unavailable (Warning)  
5619 Failed to Get Camera Model  
5620 Failed to Commit  
5621 Camera Data Lost  
5622 Camera Connection Lost  
5623 Data Collection Unknown Error  
5624 SyncB Out of Range ( Valid values = 0, 1, 2 )  
5625 Camera Exposure Mode Error

**Spectrograph specific errors (6000-6499)**

6000 Command string is empty  
6001 Acknowledge of command failed  
6002 Spectrometer not supported  
6003 Invalid Parameter  
6004 Waiting for response  
6005 Index into INI was not found for this type Spectrometer  
6006 Invalid Slit Type  
6007 Invalid Mirror Type  
6008 Invalid Mirror Position  
6009 Invalid Turret  
6010 Invalid Grating  
6011 Opened handle passed for port use is invalid  
6012 Invalid Shutter Position  
6013 Invalid Shutter or Shutter not present  
6014 Invalid Wavelength (WL < 0 if instrument does not allow it or wavelength out of range for current grating)  
6015 Invalid Nm/Step  
6016 Communication error  
6017 Filter Wheel not found or error occurred  
6018 Filter not found (invalid filter number) or error  
6019 Error in command sequence (eg. Move sent before communications established)  
6020 Grating/Slit Speed setting out of range  
6021 Error in internal EEPROM  
6022 Invalid Command sent to instrument

- 6023 General grating error (e.g. bad switch)
- 6024 Error in receiving command echo
- 6025 User Cancelled command
- 6026 Command Failed Due To Timeout

**Pulser specific errors (6500-6999)**

- 6500 Pulser Not Found

**File specific errors (7000-7499)**

- 7000 File Open failed
- 7001 File Close failed
- 7002 Invalid file handle
- 7003 File Read failed
- 7004 File Write failed
- 7005 File random access (Seek) failed
- 7006 Invalid File Header
- 7007 Invalid Data (e.g. header but no data)
- 7008 File Type Not Supported
- 7009 Invalid Data Dimension (e.g. one or more dimensions  $\leq 0$ )
- 7010 Data Type not supported
- 7011 Error Reading file header
- 7012 Error Writing file header
- 7013 Error Appending data to end of file
- 7014 Dimensions or Data Type of data to append does not match file
- 7015 Invalid File Open mode
- 7016 Error Reading data from file
- 7017 Error Writing data to file

**Sequence specific errors (7500-7999)**

- 7500 No Data Returned
- 7501 Error Allocating Buffer
- 7502 Dimensions of Background Subtraction File do not match dimensions of data being collected
- 7503 Dimensions of Flatfield File do not match dimensions of data being collected
- 7504 Dimensions of Absorbance Reference File do not match dimensions of data being collected
- 7505 Not Used
- 7506 Dimensions of Transmission Reference File do not match dimensions of data being collected

**Math specific errors (8000-8499)**

- 8000 Null Data
- 8001 Invalid Data Type
- 8002 Invalid Operation Combination
- 8003 One or more parts of math operation caused a math exception
- 8004 Dimensions of Data do not match
- 8005 Operation not supported
- 8006 Wrong Data Type
- 8007 Invalid Parameter Type

**Filter Wheel specific errors (9500-9550)**

- 9500 Filter Wheel Type not supported
- 9501 Invalid Parameter
- 9502 Waiting for response
- 9503 Index into INI was not for this type Filter Wheel
- 9504 Invalid filter number
- 9505 Opened handle passed for port use is invalid
- 9506 Invalid Filter wheel number
- 9507 Command Failed Due To Timeout
- 9508 User Cancelled Command

**Single Point Detector (SPD) specific errors (10000-10550)**

- 10000 Instrument Software Error
- 10001 Invalid Detector Number
- 10002 Detector Type out of range
- 10003 SPD unable to Set Bipolar
- 10004 SPD unable to Set Unipolar
- 10005 SPD not found
- 10006 Error Opening SPD

**X Calibration specific errors (11000-11550)****General errors**

- 11000 Null Pointer
- 11001 Function call done without successful Create (Invalid Handle)
- 11002 Number of X pixels defined in Detector is zero
- 11003 Spectrograph calibration requires non-zero pixel width
- 11004 ROI User numbers must be non-zero
- 11005 ROIs overlap or extend beyond array width
- 11006 ROI extends beyond array width.
- 11007 User numbers must be unique
- 11008 ROI group size and number of groups must be non-zero
- 11009 Size of ROI structure is invalid
- 11010 Must have active detector
- 11011 Detector needs validating
- 11012 No detector found with this ID number
- 11013 No memory to create detector
- 11014 No ROI found with this ID number
- 11015 Pixel to data point error
- 11016 Data point outside range (1 – Number of Points)
- 11017 Size of detector structure is invalid
- 11018 Number of ROIs entered differs from detector
- 11019 Number of pixels does not agree with active detector
- 11020 Number of data points does not agree with active detector

**Manual calibration errors**

11021 Must have active calibration  
11022 No memory to create calibration  
11023 No Calibration with this ID number  
11024 Relative wavenumbers REQUIRE a laser line wavelength  
11025 Polynomial order outside range (1 – 5)  
11026 Missing X,Y calibration points  
11027 Number of calibration points <= polynomial order  
11028 Must have array for parametric  
11029 Parametric Array Size doesn't agree with array X-size in detector  
11030 Invalid index for good XY calibration point  
11031 Invalid index for polynomial coefficient  
11032 Invalid calibration input or output unit  
11033 Calibration Validate failed  
11034 Calibration curve double valued  
11035 No Slope. If Units are DATA, a slope is required  
11036 Calibration has been turned off  
11037 Integer nSize does not agree with size of calibration  
11038 Invalid Get/Set Parameter ID  
11039 Parameter ID is Read Only  
11040 User number of ROIs does not agree with actual count

#### **Spectrograph error codes**

11041 Invalid size of internal Spectrograph structure  
11042 No memory to create spectrograph  
11043 No spectrograph with this ID number  
11044 Invalid size of TURRET structure  
11045 Invalid size of GRATING structure  
11046 Gratings must have non-negative Grooves/mm  
11047 Invalid Index. (must be 1, 2, ...n - the number of objects)  
11048 No spectrographs installed  
11049 No turrets installed  
11050 No gratings installed  
11051 No active spectrographs  
11052 No active turret  
11053 No active grating  
11054 This is a manual calibration object so no spectrograph information is allowed  
11055 Need at least 1 turret  
11056 Need at least 1 grating  
11057 Must have finite focal length  
11058 Must have finite inclusion angle  
11059 Must have magnification > 0  
11060 Only 1 exit mirror is allowed  
11061 Exit mirror does not exist  
11062 Gratings Per Turret does not agree with count

#### **Peak finding errors**



- 11063 Data point outside range of curve
- 11064 Peak finding routine found no peaks
- 11065 Wavelength is past the physical limits of the grating
- 11066 Tried to access point outside calibration X/Y array
- 11067 Create failed to add initial spectrometer object
- 11068 Invalid type specified in create
- 11069 Grating angle outside range -90 to +90
- 11070 Focal length negative or > 10 meters

#### **Dispersion correction**

- 11071 Optimization has not been done

#### **Step and Glue**

- 11072 Given number of steps doesn't agree with other parameters
- 11073 One or more step parameters are invalid
- 11074 Step and Glue is uninitialized
- 11075 All input glue files must have same number strips (Y dimension)
- 11076 Glue can only handle 1 Frame at this time (Z Dimension)
- 11077 An input frame is missing its calibration
- 11078 Source buffer has no data
- 11079 Output resolution is either 0 or larger than (End - Start)
- 11080 Validate glue failure

#### **Calibration file**

- 11081 Unsupported calibration file type
- 11082 Header section expected but not found
- 11083 Multiple calibrations/file: Calibration not found
- 11084 No calibration points found
- 11085 Not enough calibration points found
- 11086 Pixel portion of calibration point not found
- 11087 Wavelength portion of calibration point not found
- 11088 Invalid Segment Header (e.g. "Number of Points" not present)
- 11089 File name is null

## **WARNINGS**

NOTE: Many of the numbers listed as errors above are actually warnings and can generally be safely ignored. They are gradually being moved into this section with the same error number + 0x8000 (32768). New warnings will fill in the gaps or be added to the end.

### **Sequence specific warnings (40268-40767)**

40273 Sequence Experiment Stopped