

## Lakome Medical, Inc.

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## **Technical Datasheet – Solid State Capnography Module**



The Solid State Capnography (SSC) modules designed by Lakome Medical Inc, provides reliable medical respiratory monitoring and measurements for clinical environments.

## Main features:

- 100% galvanically isolated from patient
- Compatible with standard clinical monitoring units
- No moving parts.
- High Accuracy <1 ppm
- Automatically adjusts to altitude variations
- Low power consumption 800mW
- Compatible with present capnography tubes

The developed SSC module is 100% galvanically isolated from the patient and offers a complete solid state solution with no moving parts. This is achieved by utilizing high durability MID-Infrared LED and dual sensor technology. The dual sensing technology provides many benefits including:

- Improved accuracy
- Rejection of signal interferences from other gases
- Improved insensitivity to temperature and altitude variations

The SSC module is also equipped with an atmospheric pressure sensor to accurately calculate CO2 percentage values.

The SSC module has a serial port connector which is compatible with most modern day clinical monitors. This module is powered up from a 6V supply which is provided externally by the clinical monitor units through the serial port connector.

Further detailed specifications of the device is provided in table 1.

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Table 1. Device parameters

Maximum Power consumption	800 mW at 6V	mW
Maximum sinked current	90mA at 6V	mA
Maximum Input Voltage	15	V DC
Minimum Input Voltage	2.5	V DC
Optimal Input voltage	6	V DC
Communication protocol	RS232 serial	
Data line voltage level	∓ 6	V DC
Accuracy	<1	ppm
Frames per Second	0.12	Frames/second
Samples per frame	1000	Samples/frame
Sample rate	120	Samples/second

The figure below displays a close view of the capnography module.

