

## CEL-350 & 350IS *dBadge*<sup>™</sup> Micro Noise Dosimeters

### Introduction

The **CEL-350** is the easiest and most reliable noise dosimeter on the market. Its small size and light weight give it instant worker acceptance and there is no cable to snag, break or come unplugged. The CEL350 displays detailed test results as the unit is running, and captures all the necessary combinations of exchange rate, threshold and criterion level needed to comply with Federal, State or local requirements - with no user setup required! Calibration is super simple – just place the calibrator over the microphone and the unit will automatically enter ‘cal mode’ – then tap the control button twice and you are done!

### Operation and use

A simple drop-in rapid battery charger system provides very fast 90 minute maximum recharging time. The **CEL-350 *dBadge*<sup>™</sup>** can run for up to 28 hours continuously on a full charge. Even better – just 30 minutes charge time will give adequate capacity for a full 8-hour shift Dosimetry test. An integral 2-line LCD display shows the noise exposure results and confirms the acoustic calibrations before and after the actual run. The unit is easily locked using the controls to prevent tampering by the wearer. Four time history profiles are saved with the Q=3 and Q=5 time weighted average value plus the C and the Z peak levels.

Using the companion software, **Insight<sup>™</sup>**, you decide exactly which metrics to include with your analysis and presentation report.



**CEL-350 *dBadge*<sup>™</sup>  
micro noise dosimeter**

*CASELLA CEL Products come with  
2 year warranty and free user  
training and support!*



**CEL-6362 (or 6363)  
Drop in charger for *dBadge*  
system - completely recharges  
up to 3 units in under 90 mins**

### Key benefits

- Lightweight; less than 2.4 oz
- Small size: only 2.8 in long and 1.7 in wide and 2.0 in tall
- Quick battery recharge: full in less than 90 minutes from complete discharge
- Stores all data parameters for review
- Calculates all relevant noise dose parameters
- Time history profiling of 4 results at fixed 1 m intervals
- Wide dynamic range from 65 to a full 140 dB
- Measures simultaneously 3 dB and 5 dB exchange rates
- Lockable for security
- One-touch automatic calibration with standard acoustic calibrator

The dosimeter displays the % noise dose plus the Lavg & TWA for the run, or even more metrics in the Pro mode. Our **CEL-350** is the ideal unit for industrial hygienists, technicians and safety engineers responsible for monitoring the noise exposure of workers particularly in situations where conventional belt-worn noise dosimeters with a remote cable microphone is inconvenient

Casella's dedicated download and analysis program, **Insight<sup>™</sup>** comes with the *dBadge* system allowing all stored data to be downloaded, analyzed and stored in any file format the user requires. Multiple reports can be obtained from the same data without needing to re-measure the noise. This saves both data collection time and analysis time. All measurement kits come complete with calibrator, s/w and download cable plus rugged case.

<b>Technical Specifications</b>	
Acoustic accuracy	ANSI S1.25, IEC61252 2002 Personal sound exposure meters
Dynamic range (dB)	65 to 140
Frequency weightings	A for rms values plus Z and C for peak measurements
Time weightings	Slow for Q=5 data plus non for Q=3 data as required for standards
Exchange rate (Q dB)	5 and 3 simultaneously
Threshold level (dB)	Any levels from 70 to 90 in 1 dB steps
Criterion level (dB)	Any level between 70 and 90 in 1 dB steps
Microphone capsule	Removable 1/2" type 2 device can be calibrated with any standard acoustic calibrator using 1/2" diameter cavity
Calibration method	Automatic recognition and calibration to user set dB level
Display screen	96 x 26 pixel graphics LCD with 2 line text messages
Alarm warning indicators	Red and blue LED's showing level noise exceedances during run
Indicators	2 stage hi intensity LED's for memory, battery or noise warnings
User controls	2 push buttons for On/Off and OK/Accept
Weight (oz, g)	< 2.4 oz (68 g)
Size (in, mm)	< 2.8 x 1.7 x 2.0 in (72 x 42 x 52 mm)
Case molding	High impact ABS plastic molding
Battery pack	Two half AAA size NiMH rechargeable cells
Battery life (hr)	32 hours continuous, unit gives expected remaining battery life in hours when switched on by "fuel gauge" display icon
Charging unit	3 way <i>dBadge</i> master charger base with drop in charging via connections on back of <i>dBadge</i> casing
Memory storage (results)	At least 180 hours at 4 profiles every minute with unit showing remaining memory recording time in hours when switched on
Stored profile values	Lavg(Q=5), LZpk, Leq(Q=3), LCpk
Storage interval	Fixed 1 minute for all 4 results simultaneously
Real time clock	Date and time stamp on all calibration data and profile results
Fixing method to worker	Various fixing clips provided for clothing and hard hat mounting
Microphone protection	Lockable foam windscreen to protect microphone
Security features	<i>dBadge</i> can be locked prior to being placed on worker to prevent tampering - displaying only duration and run in progress
Localization of menus	Up to 5 standard languages can be selected for screen prompts, English, Spanish, French, German, Italian
Identification of multiple units	2 lines of ID text can be uploaded from Insight program

## Ordering information

CEL-350/K1*	Single pack <i>dBadge</i> noise dosimeter kit with standard accessories
CEL-350/K2	Twin pack <i>dBadge</i> noise dosimeter kit with standard accessories
CEL-350/K5	Five pack <i>dBadge</i> noise dosimeter kit with standard accessories
CEL350/K10	Ten pack <i>dBadge</i> noise dosimeter kit with standard accessories
CEL-350	Single <i>dBadge</i> micro noise badge unit with mounting clips and windscreen
CEL-120/2	Class 2 acoustic calibrator 114 dB at 1 kHz
CEL-6362	3 way drop in rapid master charger including PC18 universal power supply (can be "daisy chained" together for multiple kits with CEL-6358 slave charger unit)
CEL-6363	Slave charger unit and link cable to master charger for up to 3 additional dosimeters
Insight	Windows based download and database software package supplied on CD
193200B	USB Infrared adaptor for pc download and programming
CEL-6355	Multi pack kit case with space for up to 12 <i>dBadge</i> dosimeters and accessories

\*NOTE: All kits include CEL-350 *dBadge* dosimeter(s) with attachment clips and foam windscreen, CEL-120/2 acoustic calibrator, 3 bay charger base unit(s) and power supply(s), USB infrared download adaptor, Insight pc software, and rugged kit case

**Add IS after part number for the intrinsically safe version of the *dBadge*.**