Chromium™

# Single Cell Controller Specifications

FOR USE WITH

Chromium™ Single Cell Controller & Accessory Kit

PN-120263


10X GENOMICS®

10xGenomics.com

# Notices

## Manual Part Number

CG00050 Rev B

## Legal Notices



## Customer Information and Feedback

For technical information or advice, please contact our Customer Technical Support Division online at any time.

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# 1. Safety and Compliance Information

## 1.1. Regulatory

The Chromium™ Single Cell Controller has been designed, tested, and certified to be in compliance with the following standards:

- UL 61010-1:2012 and CAN/CSA C22.2 No. 61010-1-12 with a cTUVus mark to indicate that the product has been tested and certified to Canadian and US standards by TUV Rheinland and can be legally installed in those countries.
- IEC/EN 61010-1:2010 (3rd Edition): Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory use.
- EN 61326-1:2013: Electrical Equipment for Measurement, Control and Laboratory Use. EMC Requirements.
- The RCM mark indicates an electrical product complies with all the requirements of the electrical and EMC regulations of Australia and New Zealand in accordance with AS/NZS Standards.
- CE Mark indicates that the Chromium Single Cell Controller assembly is covered by a Declaration of Conformity, and has been declared in conformity with the provisions of all applicable directives in the European Union.
- RoHS Directive (2011/65/EU): Restriction of Hazardous Substances in Electrical and Electronic Equipment
- WEEE Directive (2012/19/EU): Waste Electrical and Electronic Equipment
- FCC Part 15 Class A. NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- ICES-003 (Canada): This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

## 1.2. Instrument Safety

Before operating this instrument please ensure that everyone involved with the operation of the instrument has:

- Received instruction in general safety practices for laboratories
- Received instruction in specific safety practices for the instrument
- Read and understood all related Safety Data Sheet (SDS) documents

Precautions are illustrated in the following way:

**WARNING:** Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

**CAUTION:** Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

# 2. Product Specifications

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|---|---|
| **Weight** | 12.5 lb (5.6 kg) |
| **Size (W X D X H)** | 7.9 x 10.3 x 6.4 in (20 x 26.3 x 16.4 cm) |
| **Electrical Requirements** | Nominal 100-240 Vac, 50-60 Hz, 25 W, from a standard 3-prong wall receptacle that includes a safety ground pin<br>Maximum 90-264V operational range (+/- 10% of Nominal)<br>Overvoltage Category II (Standard Receptacle) |
| **Pollution Degree** | 2 (Indoor Use Only) |
| **Ventilation Requirement** | Minimum 4 in (10 cm) Around All Sides |
| **Usable Temperature Range** | 18-28°C (64-82°F) |
| **Humidity** | 85% Max (Non-Condensing) |
| **Altitude** | 0 - 6560 ft (0 - 2000 m) |

# 3. Initial Installation Notes

To operate the Chromium™ Single Cell Controller properly and obtain maximum performance, locate the unit with the following conditions:

- Remove all transportation packaging materials and tape.
- Choose a location not subject to direct sunlight, as direct sunlight could lead to inadequate cooling conditions or rapid evaporation of reagents.
- Always keep a minimum of **4 in (10 cm)** of clearance around unit to allow free air circulation.
- Leave a minimum of **6 in (15 cm)** directly in front of the instrument for unobstructed movement of the tray door.

**WARNING:** The tray door is capable of moving an object that is in its opening path. If near the edge of the workspace, the object could fall and create a hazard.

- Choose a location on a level sturdy laboratory bench that is not subject to movement or vibration.
- Connect the Chromium Single Cell Controller to a properly grounded outlet of proper voltage. Do not position the instrument in such a way that it would be difficult to disconnect the power source. After installation, it should be possible to 1) reach the plug at the wall receptacle to safely disconnect power, or 2) reach the detachable power cord at the rear of the instrument. These areas should remain accessible for the potential need to disconnect the instrument, e.g., for servicing.

**CAUTION:** Ensure that the ground is reliably connected before plugging the Chromium Single Cell Controller's power cord into the power source (receptacle). Grounding is required to prevent electric shock. If the power source is not grounded, qualified personnel must first install a reliable safety ground.

**CAUTION:** Avoid using the Chromium Single Cell Controller in a manner not specified by 10x Genomics®. The Chromium Single Cell Controller has been designed to protect the user. If used improperly, the intended user protections can be impaired.

- Before running Single Cell Chips in the Chromium Single Cell Controller, the Readiness Test should be run according to instructions provided in *Chromium Single Cell Controller Readiness Test* – CG00051.

# 4. Maintenance

## 4.1. Interior

The Chromium™ Single Cell Controller tray and door areas have been designed to catch and contain drips and small volume of liquid spills. Occasionally, use a soft lab towel to clean these areas with a mixture of mild detergent and distilled water. For deeper, more thorough cleaning, it is acceptable to use a **5-10% Bleach** solution followed by a **70% ethanol** wash.

**NOTE:** Do not use acetone or other harsh solvents as these may remove the colored markings in the tray. Apply all standard safety practices when using cleaners, and dispose of any generated waste in a responsible manner.

## 4.2. Exterior

The exterior of the Chromium Single Cell Controller should always be kept clean and free of dust and debris that may affect its function and/or cooling efficiency. Generally, the exterior finish can be wiped down using a mixture of mild detergent and distilled water applied to a slightly dampened lab towel. As an added precaution it is recommended that the instrument be unplugged from the power source before beginning any cleaning process.

## 4.3. Service

**WARNING:** Electrical shock hazard. Do not open the Chromium Single Cell Controller. There are no user serviceable parts inside. Refer all servicing to qualified 10x Genomics® service personnel.

Servicing is required when the Chromium Single Cell Controller has been damaged in any way, e.g., a power entry module or plug is damaged, liquid was spilled into, or objects fell into the instrument, the instrument does not operate properly, or has been dropped.

Use only the power cord supplied with the Chromium Single Cell Controller. Do not replace it with a non-approved power cord as it may be inadequately rated to handle the electrical loads.

If replacing the externally accessible fuses in the power entry module becomes necessary, use only **certified** (EN60127 Sheet 5) **5 x 20 mm sized fuses rated T1AH, 250V Slow-Blow** or equivalent.

When returning a Chromium Single Cell Controller for repair, please take steps to ensure that the instrument has been decontaminated so as not to pose a hazard for 10x Genomics® service personnel.

## 4.4. Moving the Instrument

If the Chromium Single Cell Controller will be transported in a vehicle or shipped, it should be repackaged according to the *Chromium Controller Shipping Guide* – CG000058. The Readiness Test should be re-run (see *Chromium Single Cell Controller Readiness Test* – CG00051 for instructions) after relocating the instrument.

## 4.5. Environmental Requirements

It is the design intent of the Chromium™ Single Cell Controller that it be used in a typical indoor laboratory environment. The instrument's operating temperature is **18-28°C (64-82°F)**; too low or too high temperature conditions will affect the sensitive reagents used with the instrument.