Module 3: Product Description

3.2.3 Principles of Operation

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1. DESCRIPTION OF THE CONDITIONS FOR USING THE TOBACCO PRODUCT

The *IQOS* 3 System is intended to be exclusively used with the specially-designed non-combusted cigarettes called *HeatSticks*.

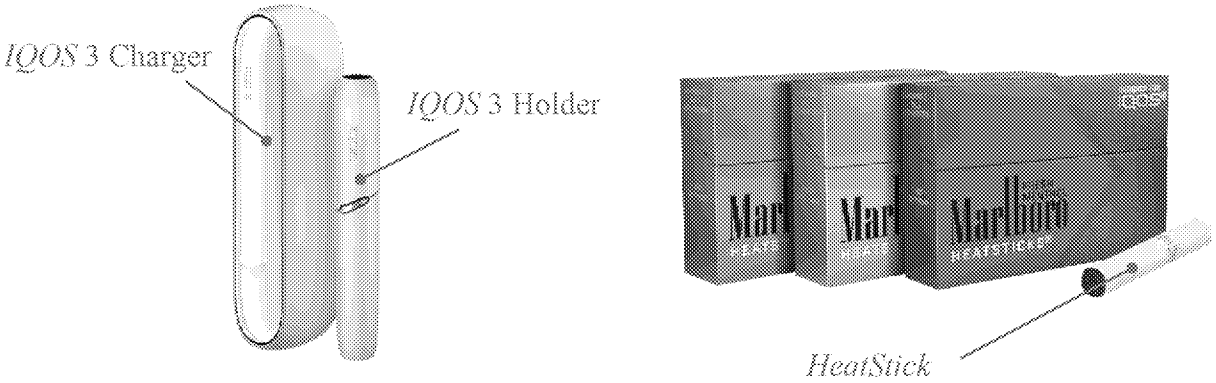


Figure 1: *IQOS* 3 System and current variants of *Marlboro HeatSticks*

The *IQOS* 3 System will be sold in a customized paperboard box, which also contains trays to hold the device and accompanying accessories (e.g. AC adapter, USB charging cable, cleaning tool …) securely during transportation and storage. The package will contain a Quick Start Guide, Safety Warnings and Instructions and a Warranty card (for additional information about user documentation refer to Module 4). The Quick Start Guide provides brief instructions for use of the *IQOS* 3 System, to allow users to get quickly accustomed to the system's operation.

1.1. Quick Start Guide

1.1.1. *How to use your IQOS®*

This section provides information needed to use the *IQOS* 3 System. The user is instructed to use the product as follows:

1. The Charger (also referred as the Pocket Charger) is turned on by pressing and holding the power button for 4 seconds. Two sets of lights (holder status and charger battery status) will flash.
2. The Holder is inserted into the Charger. Once the holder battery is fully charged the holder status light will be solid white.

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3. The *HeatStick* is inserted into the Holder, tobacco-side down, and pushed until the line indicated on the filter of the *HeatStick*.
4. The heating of the *HeatStick* is initiated by pressing and holding the holder button until the Holder vibrates and the holder button LED starts to pulsate white.
5. Once the Holder vibrates twice and the holder button LED turns to solid white, the initial heating process (pre-heating phase) is complete and the product is ready for use.
6. The product is used in much the same way as a conventional cigarette:
    - The user draws air through the *HeatStick* (puff).
    - This initiates the use heating cycle, which follows a puff-by-puff heating profile designed to provide a consistent user experience throughout use.
    - The Holder and *HeatStick* can deliver aerosol for up to either approximately 6 minutes or 14 puffs.
    - The user is informed that the usage is about to end when the Holder vibrates twice and the holder button LED starts to pulsate white (approximately 30 seconds or 2 puffs remaining).
    - When the holder button LED goes off, the use is finished.
7. Once this cycle is complete, the used *HeatStick* is removed from the Holder by sliding the front housing (cap) upward and removing it from the Holder.
8. The front housing is pushed down again and the Holder is inserted into the Charger to be recharged. Once recharged, the Holder is ready to be used again and a new *HeatStick* must be used.

In use, the *IQOS* Holder/*HeatStick* combination can be held and used in a manner very similar to a conventional cigarette.

1.1.2. *How to clean the Holder*

In this section of the Quick Start Guide a manual cleaning process using the *IQOS* Cleaning tool and *IQOS* Cleaning sticks is illustrated. It consists of the following steps:

1. Before the start of the cleaning, the front housing is removed from the Holder.
2. The Cleaning tool is inserted on top of the Holder and rotated gently.
3. Any residual fragments inside of the Holder can wiped off using Cleaning sticks.
4. Once the manual cleaning is complete, the front housing is slid back onto the Holder.

1.1.3. *Quick Tips*

This section provides information to the user about how to perform two common tasks:

- Checking battery status of the Charger with quick press of the button and
- Resetting the device by pressing and holding the charger button for 10 seconds. After releasing the button, both battery status lights will fade in, flash twice and then progressively fade to confirm a reset.

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In addition, troubleshooting for two common errors is also described:

- The Holder light flashes white light twice: This means the device detects that ambient temperature is outside of allowed range and the user needs to wait until the ambient temperature is within the limits.
- Holder flashes a red light: This indicates an error and the user should reset the device.

1.2. Safety Warnings and Instructions

This document provides information concerning safety of which the user should be aware to safely operate the product. It also includes the following information:

- Information about correct disposal of the *IQOS* 3 System according to the applicable regulations.
- Information about compliance with FCC standards.
- Basic technical data about the *IQOS* 3 System and the AC power adapter (accessory).

1.3. Warranty Card

The warranty card contains information about the warranty period along with conditions and customer care contact information.

2. TIME NEEDED FOR A USER TO CONSUME A SINGLE UNIT OF THE PRODUCT

The length of time it takes for a user to consume a single *HeatStick* is predetermined. Each usage experience lasts for either 14 puffs or approximately 6 minutes, depending which limit is reached first. However, a user can finish the usage experience before reaching one of the above limits. To do so, the user simply switches off the *IQOS* 3 Holder by pressing the holder power button for 3 seconds until the holder button LED switches off.

3. HEATING SOURCE

3.1. Heating blade

The *IQOS* 3 Holder uses a heating blade, which is part of the overmolded heater seal, to heat the *HeatStick*. When user inserts a *HeatStick* in the *IQOS* 3 Holder, this V-shaped blade is inserted into the tobacco plug of the *HeatStick*.

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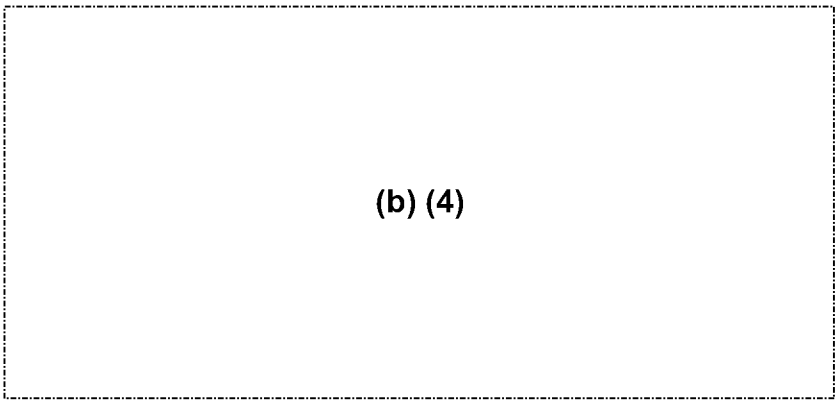


Figure 2: Heater blade

The heater blade (b) (4) V-shaped part, measuring in height.

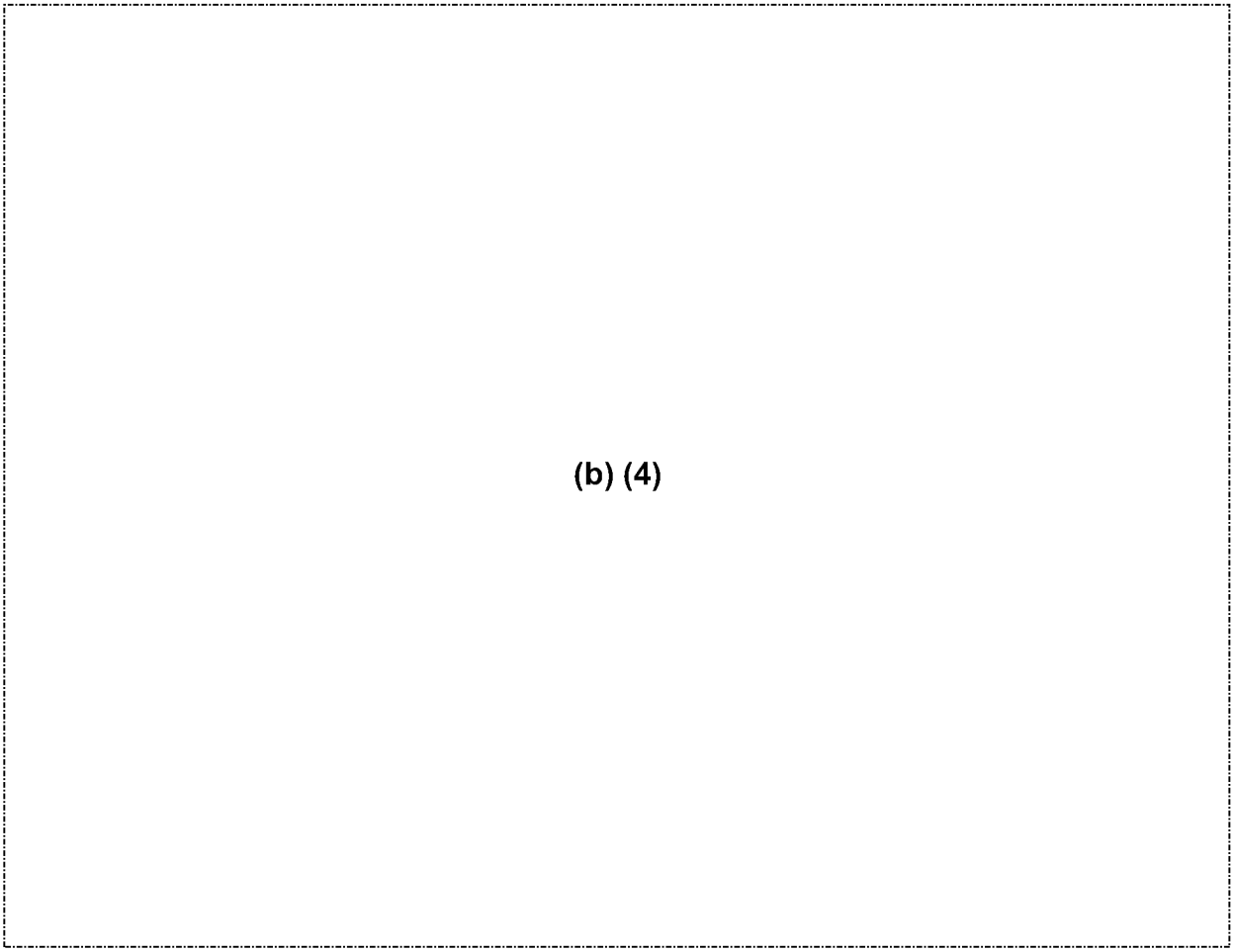


Figure 3: Technical drawing of the Heater blade

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The heart of the heater blade is a platinum element, (b) (4) (b) (4) When power is applied to the platinum element it heats up, which results in an energy and heat transfer into the tobacco plug.

The heater blade itself is constructed from multiple layers:

(b) (4)

The heating blade is comprised of four areas:

(b) (4)

Figure 4: Scheme of the distinct areas of the heater blade

The requirements for the heater blade are summarized in the Table 1.

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(b) (4)

3.2. Heating profiles

As already mentioned in section 3.2.1.1 *Components or Parts* (chapter 2. Software/Firmware), the heater blade is operated by heater control module.

The key aspect of the heater controls are the heating profiles. *IQOS* 3 device contains two heating profiles:

- Standard heating profile (C28 profile), which is also used in the previous models including marketed *IQOS* 2.4 device and is used in most usage situations, and
- Alternative heating profile (C28-6 profile), (b) (4) (b) (4)

(b) (4)

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