Module 3: Product Description

3.2.2.3 Function

TABLE OF CONTENTS

1. TOBACCO HEATING SYSTEM (THS) 3
2. TOBACCO HEATING DEVICE (THD) 3
   - 2.1. *IQOS* 3 Holder 4
   - 2.2. *IQOS* 3 Charger 5
   - 2.3. *IQOS* 3 Electronics 7
     - 2.3.1. IQOS 3 Holder electronics 7

(b) (4)

     - 2.3.2. IQOS 3 Charger electronics 12

(b) (4)

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

(b) (4)

2.4. User interface 16
2.4.1. IQOS 3 Holder 16
2.4.2. IQOS 3 Charger 18

LIST OF FIGURES

Figure 1:
Figure 2:
Figure 3:
Figure 4:
Figure 5:
Figure 6:
Figure 7:
Figure 8:
Figure 9:

(b) (4)

LIST OF TABLES

Table 1: *IQOS* 3 Holder Button user interface 17
Table 2: Interpretation of the key *IQOS* 3 Holder LED patterns 17
Table 3: *IQOS* 3 Charger Button user interface 18
Table 4: Interpretation of the key *IQOS* 3 Charger LED patterns 19

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

1. TOBACCO HEATING SYSTEM (THS)

During the burning and smoking of a conventional cigarette, the processes of heating, distillation, thermal decomposition, pyrolysis, and partial or incomplete combustion occur.

The underlying principle of Tobacco Heating System (THS), composed of *IQOS* System (Tobacco Heating Device - THD) and *HeatSticks*, is that by only heating tobacco rather than burning it, as in a conventional cigarette, it is possible to significantly reduce the levels of Harmful and Potentially Harmful Constituents (HPHCs) generated in the aerosol whilst retaining an acceptable sensory experience for the user.

THS was developed to achieve two sets of goals. First set of goals relates to the chemical and physical characteristics of the aerosol that is produced by the THS. These include, but are not limited to:

- A substantial reduction in the levels of HPHCs as compared to conventional cigarette smoke.
- A nicotine yield similar to conventional cigarette smoke.
- An aerosol droplet size distribution that is within the respirable range to ensure that pulmonary deposition and distribution will be similar to that for the smoke of a conventional cigarette.

The second set of goals relates to the likelihood that adult users will accept THS as a replacement for conventional cigarettes, and includes but is not limited to:

- Physical design which ensures minimum disruption to the smoking ritual.
- A use cycle which is similar to conventional cigarettes in terms of puff number and duration of a single *HeatStick* use.

2. TOBACCO HEATING DEVICE (THD)

The upgraded version of the *IQOS* System – *IQOS* 3 consists of 2 main components, similarly as Authorized *IQOS* System:

- *IQOS* 3 Holder (electrical heating unit) and
- *IQOS* 3 Charger (recharging case for the Holder).

Besides Holder and Charger, THD also consists several essential accessories (e.g. AC adapter, USB charging cable, cleaning tool …) which are used in combination with Charger and Holder.

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

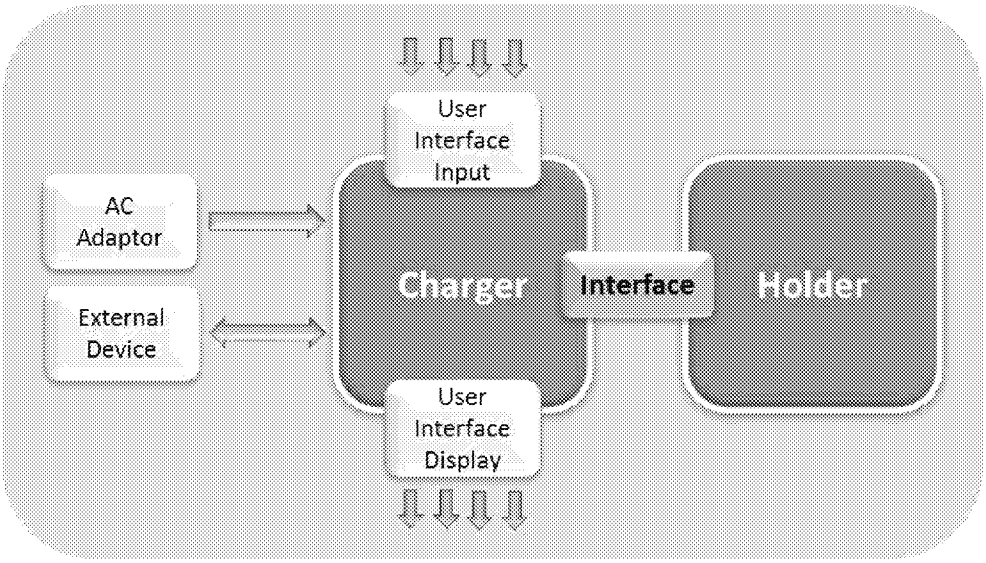


Figure 1: Schematic showing the relationship between the Holder and the Charger

2.1. *IQOS* 3 Holder

IQOS 3 Holder is used to heat tobacco material in a specially-designed non-combusted cigarettes *HeatSticks*.

(b) (4)

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

The Holder will turn off the heating process in the event that overheating is detected by the thermal monitoring system.

(b) (4)

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

(b) (4)

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

(b) (4)

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

(b) (4)

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

(b) (4)

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

(b) (4)

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

(b) (4)

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

(b) (4)

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

(b) (4)

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

(b) (4)

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

(b) (4)

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

(b) (4)

2.4. User interface

2.4.1. *IQOS 3 Holder*

The user interface on the Holder is comprised of a low-profile button and white and red light emitting diodes (LEDs). These allow the user to:

- Switch the Holder off and on,
- Displays the status of the device,
- Initiate the heating process and inform the user when the device is ready for use (i.e. when pre-heating is complete),
- Inform the user when the inhalation experience is about to finish,
- Inform the user when the Holder needs charging,
- Informs the user of a malfunction or error and
- Interrupt the inhalation experience at any time by manual action on the switch.

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

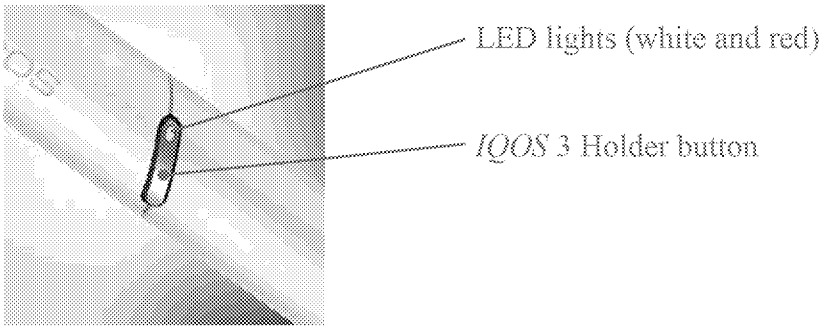


Figure 8: User interface on *IQOS* 3 Holder

Please find more details about the button user interface and LED patterns in the tables below.

Table 1: *IQOS* 3 Holder Button user interface

Button pressing	Action
Short button press (less than 1 sec)	Show the device status
Standard button press (between 1 and 3 sec)	• Turns the device on or off • Starts the heating process
Long button press (more than 3 sec)	Stops the heating process

Table 2: Interpretation of the key *IQOS* 3 Holder LED patterns

LED light pattern	Interpretation
White pulsating light	• Indicates pre-heating phase • Indicates that the heating phase is almost complete
White solid light	• Indicates the status of the Holder • Indicates that the Holder is in heating phase and the user can draws on the *HeatStick* to create an aerosol (puff).
White light blinks twice	Warning signal (e.g. Holder is outside of operating temperature)
Red solid light	Holder battery needs to be recharged.
Red blinking light	A malfunction or error has occurred.

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

2.4.2. *IQOS 3 Charger*

The user interface on the Charger is comprised of a low-profile button and 7 colored LEDs (red, white and blue). These allow the user to:

- Switch the device (Holder and Charger) off and on.
- Monitor charging of the Holder battery from the Charger battery.
- Monitor charging of the Charger battery.
- Monitor the heating blade thermal cleaning process.
- Request a reset of the Charger and the Holder.

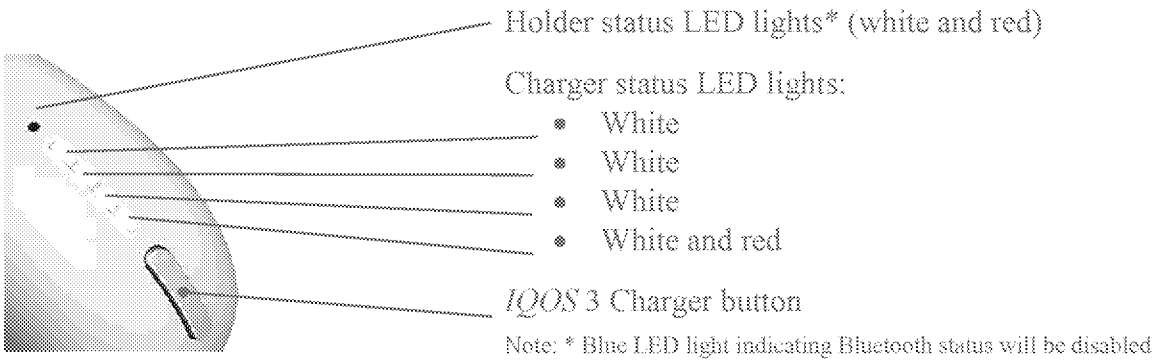


Figure 9: User interface on *IQOS* 3 Charger

Please find more details about the button user interface and LED patterns in the Table 3 and Table 4.

Table 3: *IQOS* 3 Charger Button user interface

Button pressing	Action
Short button press (less than 1 sec)	Show the device status
Standard button press (between 3 and 7 sec)	Turns the device on or off
Long button press (more than 7 sec)	Resets the device

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.

Table 4: Interpretation of the key *IQOS* 3 Charger LED patterns

LED light pattern	Interpretation
Holder status LED lights	
White pulsating light	• Holder battery is charging • Holder is performing thermal cleaning
White solid light	Holder is charged
White light blinks twice	Thermal cleaning of the Holder is mandatory (this pattern occurs once the user closes to Charger door)
Red blinking light	A malfunction or error has occurred.
Charger status LED lights	
White pulsating light	Charger battery is charging
White solid light	Each solid light represents that 25 % of the overall Charger battery capacity is charged.
White light blinks twice	Warning signal (e.g. Charger is outside of operating temperature)
Red blinking light	A malfunction or error has occurred.

Confidentiality Statement

Data and information contained in this document are considered to constitute trade secrets and confidential commercial information, and the legal protections provided to such trade secrets and confidential information are hereby claimed under the applicable provisions of United States law. No part of this document may be publicly disclosed without the written consent of Philip Morris International.