525. Contiguous Array

Given a binary array `nums`, return *the maximum length of a contiguous subarray with an equal number of* `0` *and* `1`.

Example 1:

```
Input: nums = [0,1]
Output: 2
Explanation: [0, 1] is the longest contiguous subarray with an equal
number of 0 and 1.
```

Example 2:

```
Input: nums = [0,1,0]
Output: 2
Explanation: [0, 1] (or [1, 0]) is a longest contiguous subarray with
equal number of 0 and 1.
```

Constraints:

- `1 <= nums.length <= 10<sup>5</sup>`
- `nums[i]` is either `0` or `1`.

```python
class Solution:
    def findMaxLength(self, nums: List[int]) -> int:
        if len(nums)==1:
            return 0
        for i,ele in enumerate(nums):
            if ele == 0:
                nums[i] = -1
        ans = 0
        freq = {0:-1}
        prefix = 0
        for i,ele in enumerate(nums):
            prefix = prefix+ele
            if prefix in freq:
                ans = max(ans,i-freq[prefix])
            else:
                freq[prefix] = i
        return ans
```